

Yellowstone River Cultural Inventory—2006

Overall Summary Report

With River-Length Interest Group Analyses

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Research Team and Support Staff

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Yellowstone River Cultural Inventory—2006 Overall Summary

Introduction

The Yellowstone River has a long history of serving human needs. Native Americans named it the Elk River because of its importance as a hunting environment. William Clark explored much of the river in the spring of 1806 and found it teeming with beavers. By 1906, the US Bureau of Reclamation was sponsoring diversion projects that tapped the river as a source of irrigation waters. The river then enabled “twentieth-century progress” and today it supports many nearby agricultural, recreational and industrial activities, as well as many activities on the Missouri River.

Management of the shared resources of the Yellowstone River is complicated work. Federal and state interests compete with one another, and they compete with local and private endeavors. Legal rights to the water are sometimes in conflict with newly defined needs, and, by Montana law, the public is guaranteed access to the river even though 84 percent of the riverbank is privately owned.

Interestingly, in spite of the many services it provides, the Yellowstone River in 2006 remains relatively free-flowing. This fact captures the imaginations of many people who consider its free-flowing character an important link between contemporary life and the unspoiled landscapes of the Great American West. As a provider, as a symbol of progress, as a shared resource, as a management challenge, and as a symbol of our American heritage, the Yellowstone River is important.

The Yellowstone River Cultural Inventory—2006 documents the variety and intensity of different perspectives and values held by people who share the Yellowstone River. Between May and November of 2006, a total of 313 individuals participated in the study. They represented agricultural, civic, recreational, or residential interest groups. Also, individuals from the Crow and the Northern Cheyenne tribes were included.

There are three particular goals associated with the investigation. The first goal is to document how the people of the Yellowstone River describe the physical character of the river and how they think the physical processes, such as floods and erosion, should be managed. Within this goal, efforts have been made to document participants’ views regarding the many different bank stabilization techniques employed by landowners. The second goal is to document the degree to which the riparian zone associated with the river is recognized and valued by the participants. The third goal is to document concerns regarding the management of the river’s resources. Special attention is given to the ways

in which residents from diverse geographical settings and diverse interest groups view river management and uses. The results illustrate the commonalities of thought and the complexities of concerns expressed by those who share the resources of the Yellowstone River.

This overall summary provides several overviews of the Yellowstone River Cultural Inventory—2006. The first section provides an explanation of the research approach. It explains how the river was divided into five geographic segments, the recruitment of Native Americans and the efforts to include individuals from four interest groups: agriculturalists, local civic leaders, recreationalists and residentialists, within each of the five geographic segments.

The second section of this overall summary describes the steps taken in analyzing the textual data of the project. Well over 2700 pages of interview texts were generated by this project. The content of the interview texts was distilled by way of analytical steps that would retain geographical and interest group integrity.

The third section includes a brief overview of the key concerns and implications of the evidence gathered for each group: agriculturalists, local civic leaders, recreationalists, residentialists and Native Americans. Detailed river-length analyses for each group are found in later sections of this volume.

Overviews of the geographic segment analyses are found in the fourth section. These overviews describe the major themes of concern among the people of each segment: Missouri River to Powder River, Powder River to Big Horn River, Big Horn River to Laurel, Laurel to Springdale, and Springdale to Gardiner. The details of each segment-specific analysis are found in the companion volumes.

Fifth, this summary identifies the primary implications exposed in the evidence gathered. Attentions, here, are limited to three sets of understandings: 1) desires for the bank stabilization projects and ideas regarding the best methods for addressing erosion; 2) knowledge of the riparian zone and notions regarding its value; and 3) notions about river management as a means of protecting the river as a shared resource.

Finally, the structure of the companion volumes is explained.

The Research Approach

Identification of Geographic Segments: The Yellowstone River is over 670 miles in length. It flows northerly from Yellowstone Lake near the center of Yellowstone National Park in Wyoming. After exiting the park, the river enters Montana and flows through Paradise Valley toward Livingston, Montana, where it turns eastward. It then follows a northeasterly path across Montana to its confluence with the Missouri River in the northwestern corner of North Dakota.

Five geographic segments along the river are delineated for purposes of organizing the inventory. These five segments capture the length of the river after it exits Yellowstone National Park and as it flows through eleven counties in Montana and one county in North Dakota. The geographic delineations are reflective of collaborations with members of the Yellowstone River Conservation District Council and members of the Technical Advisory Committee and the Resources Advisory Committee.

Working from the confluence with the Missouri River towards the west, the first geographic segment is defined as Missouri River to Powder River. This geographic segment includes some of the least populated regions of the entire United States. This segment is dominated by a broad, relatively slow-moving river that serves an expansive farming community whose interests blend with those folks living along the seventeen miles of the Yellowstone River that traverse North Dakota. Here the Yellowstone River is also important as a habitat for paddlefish and Pallid sturgeon. At the confluence with the Missouri River, the size of the channel, significant flow and substantial sediment carried by the Yellowstone River makes its importance obvious to even the most casual of observers. Prairie, Dawson and Richland Counties of Montana are included in this segment, as well as McKenzie County, North Dakota.

The second geographic segment, Powder River to Big Horn River, is delineated to include the inflows of the Big Horn and Tongue Rivers as major tributaries to the Yellowstone River and to include the characteristics of the warm-water fisheries. This segment is delineated to recognize the significant agricultural activities of the area and the historical significance of the high plains cowboy culture. This segment includes Treasure, Rosebud and Custer Counties.

The third geographic segment, Big Horn River to Laurel, essentially includes only Yellowstone County, but it is a complex area. To begin, important out-takes near Laurel divert water to irrigations projects further east. Additionally, it is the one county along the length of the river with a sizable urban population. Billings is known as a regional center for agriculture, business, healthcare and tourism. This area is notable for its loss of agricultural bottomlands to urban development. Irrigation projects are important east of Billings, especially in the communities of Shepherd, Huntley and Worden. These communities and Laurel also serve as bedroom communities to Montana's largest city, Billings. It is in Yellowstone County that the river begins its transition to a warm-water fishery.

The fourth segment, Laurel to Springdale, ends at the northeastern edge of Park County, Montana. The river in this area is fast-moving and it supports coldwater fisheries. While there is little urban development in this segment, there are some rather obvious transformations occurring as agricultural lands near the river are being converted to home sites for retirees and vacationers. The geographic segment includes Sweet Grass, Stillwater, and Carbon Counties.

The last geographic segment is defined as Springdale to the boundary with Yellowstone National Park at Gardiner, Montana and is within the boundaries of Park County. The

river leaves Yellowstone National Park and enters Montana at Gardiner. It flows in a northerly direction through Paradise Valley and is fast-moving. It supports a cold-water fishery that is well-known for its fly fishing potential. Near Livingston, Montana the river turns easterly and broadens somewhat thus losing some of its energy. However, severe floods occurred in 1996 and 1997, and local groups have since spent many hours in public debates concerning river management.

Recruitment of Native Americans: Native Americans also have interests in the Yellowstone River. They are active in maintaining the cultural linkages between their histories and the local landscapes. For the purposes of this study a number of Native Americans from the Crow tribe and the Northern Cheyenne tribe were included. Native Americans were recruited by means of professional and personal contacts, either as referrals from state agency personnel, from Resource Advisory Committee members of the Yellowstone River Conservation District Council, or from other project participants.

Recruitment of Geographic Specific Interest Group Participants: The participants represent a volunteer sample of full-time residents of the towns and areas between the confluence of the Yellowstone and Missouri Rivers in North Dakota and the town of Gardiner, Montana at the north entrance to Yellowstone National Park. Participants were recruited from four major interest groups: agriculturalists, local civic leaders, recreationalists, and residentialists living near the river. A database of names, addresses and contact information was constructed for recruitment purposes. Nearly 800 entries were listed in the database, representing a relatively even contribution across the four major interest groups.

Individuals representing agriculture interests, including farmers and ranchers, were identified and recruited from referrals provided by the local Conservation Districts, the Yellowstone River Conservation District Council and the Montana Office of the Natural Resources Conservation Service.

Individuals holding civic leadership positions, including city mayors, city council members, county commissioners, flood plain managers, city/county planners, and public works managers, were identified and recruited through public records.

Individuals who use the Yellowstone River for recreational purposes, including hunters, fishers, boaters, floaters, campers, hikers, bird watchers, rock hunters, photographers, and others who use the river for relaxation and serenity, were identified and recruited from referrals provided by members of the Resource Advisory Committee. Participants were also identified and recruited by contacting various non-governmental organizations such as Ducks Unlimited, Trout Unlimited, the Audubon Society and by contacting local outfitting businesses.

The names of property owners holding 20 acres or less of land bordering the Yellowstone River, or within 500 feet of the bank, were obtained through a GIS search of public land ownership records. Twenty acres was used as a screening threshold to separate people who lived along the river corridor but whose incomes were from something other than

agricultural practices (residentialists) from those who were predominantly farmers or ranchers (agriculturalists). The names were sorted by county and randomized. Recruitment proceeded from the county lists. Other people living very near the river and whose primary incomes were not generated by agriculture were also recruited. These additional participants may not have had property that technically bordered the river and/or they may have owned more than 20 acres. In all cases, the recruits did not consider agricultural as their main source of income.

Participants were recruited by telephone and individual appointments were scheduled at times and meeting places convenient for them. Many interviews were conducted in the early morning hours and the late evening hours as a means of accommodating the participants' work schedules. A total of 313 people participated in the project, including 86 representatives from agriculture, 68 representatives in local civic roles, 76 representatives of recreational interests, 76 residentialists and seven Native Americans. A relatively equal representation was achieved in each geographic segment for each interest group.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|--|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Description of Interviews and Collection of Participant Comments: A master protocol was designed from questions provided by the US Army Corps of Engineers and approved by the Office of Management and Budget (OMB approval # 0710-0001; see example in the appendix to this volume). Questions were selected that would encourage participants to describe the local environs, their personal observations of changes in the river, their uses of the river and any concerns they may have had about the future of the river as a shared resource. Open-ended questions were used as a means of encouraging participants to speak conversationally.

The questions were adapted to the participants' interest groups. For instance, interviews with agriculturalists began with the question, "How many years have you been in operation here?" while local civic leaders were asked, "How many years have you lived in this community?" Similarly, agriculturalists were asked, "Are there any problems associated with having property this close to the river?" and local civic leaders were asked, "Are there any problems associated with having private or public properties close to the river?" The overriding objective of the approach was to engage the participants in conversations about the river, its importance and their specific concerns.

Participants were promised confidentiality, and open-ended questions were asked as a means of encouraging the residents to talk about the river, the local environs and their personal observations and concerns in their own words. All respondents were interested in talking about their perspectives, and they represented a variety of views of the river, including: farming, ranching, agricultural science, commercial development, recreation, civic infrastructure, environmental activism, historical views and entrepreneurial interests.

With only three exceptions, the interviews were audio-recorded and verbatim transcripts were produced as records of the interviews. In the other three cases, hand-written notes were taken and later typed into an electronic format. The total resulting interview data totaled approximately 2,700 pages of interview text.

Steps of Data Analysis

Segment-Specific Interest Group Analyses: Taking all audio-recordings, transcripts and field notes as the complete data set, the research group first set out to determine the primary values and concerns for each geographic segment-specific interest group.

| 21 Segment-Specific Interest Group Analyses | | | | | | |
|--|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
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| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

The team began with the four interest groups from the segment Springdale to Laurel. Team members read individual interview transcripts and determined a core set of values and concerns for the individuals represented. As a team, notes were compared and a combined outline of values and concerns was constructed for each interest group in the geographic segment.

Quotes were then taken from each transcript in the set to illustrate the particular values and concerns. Outlines of the interest group analyses for the Springdale to Laurel segment were then used as aids in constructing the interest group analyses in all other geographic segments. Care was taken to adapt the interest group analyses to highlight if, and when, the core values and concerns were different in each geographic segment. The Native American perspective was addressed as an individual analysis with attention to the specifics of those perspectives. Each of the 21 segment-specific interest group analyses was then illustrated with quotes from interviews.

Segment-Specific Geographic Summaries: A summary of the values and concerns for each geographic segment was constructed using the sets of four geographic-specific interest group analyses. Geographic summaries were written to reflect the concerns that crossed all interests groups of the segment, either as points of agreement or disagreement, and were illustrated with quotes from the four relevant interest group analyses.

| 5 Segment-Specific Geographic Summaries | | | | | | |
|---|--|---|--|---|--|-------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

River-Length Interest Group Summaries: River-length interest group summaries were constructed for each of the four primary interest groups. For example, agricultural concerns from the five geographic segments were compared and quotes were taken from the segment-specific interest group reports to illustrate commonalities and differences. Similar reports were constructed for local civic leaders, recreationalists and residentialists.

| 4 River-Length Interest Group Summaries | | | | | | |
|---|--|---|--|---|--|-------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Key Concerns and Implications from Primary Interest Groups

Agriculturalists: There are five issues that seem to be most particular to riverfront agriculturalists. The first issue involves an apparent lack of effort, or success, by authorities and neighbors to eradicate noxious weeds. Salt cedar, leafy spurge, Canadian thistle, Russian olive, and spotted knapweed are all named as problems, and farmers and ranchers are unanimously concerned that their weed problems will only get worse. The second anxiety is related to the federal government's management of the flood plain. Many express fears about the creation of new regulations or restrictions on agricultural flood plain activity. Such regulations could affect the individual's productivity. The third concern is over the security of water rights. Changes in local and state demographic profiles are viewed with trepidation as agriculturalists fear that water adjudications could be affected. Fourth, agriculturalists often discuss the importance of storing water, especially as a means of keeping water for use in Montana. Finally, when taking all the issues into account, agriculturalists worry about the future of their livelihoods. At stake is far more than family incomes. Agriculturalists view the threats as potentially impacting their communities, their heritage, their culture and America's food supply.

It is apparent that the agricultural interest group views the various pressures on their livelihoods as real and threatening. It is also apparent that the agricultural interest group needs to develop new and more robust partnerships with agencies and other interest groups. Finally, it appears the Yellowstone Conservation District Council can play an important role in achieving constructive working relationships with the private agricultural producers that border the Yellowstone River.

Local Civic Leaders: There are several points of discussion that seem to carry great weight for individuals in local civic leadership roles. Conversations with these participants often include discussions about government and the philosophies behind democratic processes. They also discuss the challenges of local citizenries, the best ways to connect with state and federal entities and concerns about flood plain maps and official evaluations of local dikes.

Discussions with local civic leaders offer four implications for the future. First, there is a need to generate and share good information at the local level. Second, there is need to help local officials with the complexities of holistic management, especially new officials. Third, with limited resources and growing demands, it is obvious that not everyone will have everything they want. It seems certain that sharing the resources will only become more difficult. Finally, governance via rules and regulations will require multiple strategies and careful coordination across the various entities and agencies involved.

Recreationalists: Three concerns seem to be at the heart of the recreationalists' perspective when considering the future of the river. First, they are dedicated to the uniqueness of the river, and are advocates of keeping the river free-flowing. Second, they view the public access laws of Montana as essential rights which must be protected against all threats. Third, they attend to water quality issues and are committed to encouraging best practices on the part of agriculture and industry.

Four implications emerge from an analysis of the conversations with recreationalists. The first is that recreational activities add a great deal to Montana's local economies. Many of the changes in Montana's communities are a result of the recreational appeal of the river. Second, recreational interests are linked, often legally, to the missions and purposes of governmental agencies; thus, recreationalists are likely to partner with any agency looking out for the health of the river. The third implication is that recreationalists are willing and ready to collaborate with agriculturalists in order to solve mutual problems. The fourth implication is that recreationalists worry about pollution and other effects of industrial, municipal and residential activities. However, they recognize their loyalties and interests are often ironically splintered, and so they ready themselves to accept the complexities and difficulties of working to address all interests.

Residentialists: Residentialists are deeply committed to maintaining healthy wildlife populations and to high water quality standards. Yet, only a few of them are particularly well versed in explaining how the riparian areas contribute to each of these concerns. Rather, three different issues emerge as important when considering the residentialists'

perspectives. First, they are especially protective of their property rights. They value their privacy. While they generally acknowledge the public's right to be on the river, they express varying degrees of understanding for recreationalists who violate the "high water" designations. They mostly oppose recreationalists using their properties as if they are public access sites. Second, when asked if they worry that they might be flooded or that the river might erode the bank away, there is a sizable group of residentialists who agree that over time such possibilities are real but who also explain away these threats by saying, "Not In My Lifetime/Years." These residentialists were identified as NIMLYs. They are residentialists who view the river as mostly benign and who see no real threat to their properties. The third particular concern of residentialists is that they believe unchecked development near the river will eventually either ruin the privacies they have come to enjoy or force the sale of their homes as they will not be able to afford the subsequent increases in property taxes.

Four implications emerge from an analysis of the conversations with residentialists. The first is that residentialists are potentially strong allies when looking for individuals to support practices that will promote the health of the river and the riparian areas. However, at this point some are not well-enough informed to help. A second implication is that further residential development will decrease the informal paths that the public uses to access the river. Pressures will build for more public access sites. A third implication involves seemingly incompatible wishes. They appear to want a free-flowing river and the ability to protect private property. Given that the first wish is to some extent compromised every time the second wish is granted, it seems guidance is needed in the local communities regarding how to avoid further complicating matters with increasing riverfront developments. Finally, given that residentialists articulated so many different opinions and perspectives, it is apparent that every influx of new people and every new generation of adults will need to be educated and assisted in understanding the river, the management strategies, and the constraints of local governments.

Native Americans: There are three sets of concerns specific to Native Americans. They are concerned about pollution in the Yellowstone tributaries, especially as those problems are a function of faulty wastewater treatment facilities on the reservations. They are also concerned about the cultural separations occurring as each generation seems to be not only physically removed from the river, but spiritually removed as well. In some cases, these detachments from the Yellowstone River have caused tribes to relocate cultural practices onto the river's tributaries. The third set of concerns is articulated as vulnerabilities due to economic hardships and political problems that allow for unfortunate natural resource decisions.

Four implications are derived from discussions with Native Americans. The first is that the Yellowstone River should be managed according to holistic principles, those that include the entirety of the basin and its constituencies. Second, tribal communities should be given as much support as possible when dealing with problems that ultimately effect downstream water quality and quantity. Third, oral accounts of the river should be more fully gathered and incorporated into the official records of the river. And fourth, there are

many mutually-beneficial opportunities for partnerships between the interests of the Native Americans, other interest groups, and managers.

Exploring Additional Documents Concerning Interest Groups: Detailed analyses of each of the major interests groups overviewed above are provided in this volume as river-length summaries. Readers are encouraged to explore this volume further. The quotes used in each of the river-length summaries are used for illustrative purposes. They are taken from the detailed analysis found in other volumes of this work. For example, a quote identified as have been provided by a *Richland County Agriculturalist* would be found under the Agriculturalists Interest Group Analysis for the segment titled, Missouri River to Powder.

Key Discussions within Geographic Segments

Research data was collected by geographic segment from individuals representing each of the four interest groups, and segment-specific summaries are available for the purpose of describing how the four interest groups perspectives' co-exist within a particular geographic area. For instance, agriculturalists, local civic leaders, recreationalists and residentialists from the segment Missouri River to Powder River are compared and contrasted in the segment-specific summary for that area. The segment-specific summaries attempt to more holistically present the geographic communities by identifying the primary discussions or themes of discussion that are found across the groups from a particular geographic area. Those summaries are available in the companion documents (Parts I-V). Brief overviews of the segment-specific summaries are presented here.

Missouri River to Powder River: A review of the interview data for the segment, Missouri River to Powder River, suggests that people in this area engage in four primary discussions when asked about the Yellowstone River. First, the notion of Eastern Montana is not simply a geographic reference. It is a defining concept that captures the agricultural roots and the cultural values of the people living in the study segment, and the river is an essential element within their notion of Eastern Montana. Second, the river is discussed as a wholesome recreational outlet. However, shifting landownership is noted as an important change in the recreational context. Third, even though agricultural practices are viewed as the mainstay of the local economies, many participants discuss the long-term economic viability of their communities as a concern. Industrial and residential developments along the river's edge are seemingly remote possibilities and are generally discussed with references to flood plain restrictions and the stability of nearby dikes. Finally, discussions of managing the river are limited, but a variety of opinions are offered regarding bank erosion and stabilization techniques.

Powder River to Big Horn River: In the study segment, Powder River to Big Horn River, three conversations emerged across the four interest groups. The first conversation focuses on the "familiar way of life." The conversation exposes a local identity that is tied to agriculture and to traditional forms of recreation, such as hunting and fishing. When asked if the familiar management practices are sufficient in terms of sharing the

river's resources, some locals express concerns. The second conversation explicitly acknowledges that the demand for recreational access to the river's resources is in its infancy in terms of representing a problem. The third conversation focuses on controlling the river with rip-rap and dikes.

Big Horn River to Laurel: The study segment Big Horn to Laurel includes data from the people of one large county, Yellowstone County. Three themes dominate conversations with the four interest groups. One theme focuses on the evolving communities of Yellowstone County, most of which are influenced by the economic success and sheer growth of Billings. The second theme focuses on the evolving relationships that the people have with the river. While traditional agricultural activities continue in the county, many people discuss notions related to urban and residential experiences and how the river becomes an asset that improves one's quality of life as an urban dweller. The third theme involves a complex tangle of pressures and demands that require managerial strategies capable of dealing with a future that has arrived.

Laurel to Springdale: In the study segment, Laurel to Springdale, three themes emerge as dominant across the four interest groups. One theme focuses on the changing riverbank profile as more and more residential homes are built on the river's edge. The second theme focuses on the river as a powerful and dynamic physical entity. The third is about the changing social profiles of their communities and how those changes influence user practices.

Springdale to Gardiner: The segment Springdale to Gardiner essentially takes in the river as it flows through Park County. A review of the interview data for Park County suggests that people in this area engage in five primary discussions when asked about the Yellowstone River. First, they seldom speak only of the river, as they are likely to broaden the conversation to a discussion of the changes that are occurring in Paradise Valley. They see their valley as changing rapidly. Second, the floods of 1996 and 1997 left lasting impressions on the people of Park County. Even newcomers are aware of those events and of the devastations visited upon locals. Third, many people in Park County are vocal participants in public deliberations concerning the management of the river. The 1997-2003 Task Force created a legacy that continues to define discussions of the river and its resources. Fourth, then, are the particular topics that continue to generate discussions in the wake of the Task Force. These include debates about rip-rap, setbacks and Mill Creek. Finally, a set of observations emerge as the Park County residents both reflect on the Task Force and move forward. These observations are shaping community members' concerns about the river, the role of governing agencies and local commitments to future public processes.

Exploring Additional Documents Concerning Geographic Segments: Detailed analyses of each of the geographic segments overviewed above are provided in the other volumes of this work. Readers are encouraged to explore those volumes as a means of furthering their understandings of how the concerns of the four interests group together into local conversations about sharing the river.

Each of the other volumes is dedicated to a specific geographic segment of the river (i.e., Missouri River to Powder River) and each includes: 1) an explanatory summary of the primary points of concerns for the particular segment, 2) an outline of the textual materials gathered from agriculturalists for that particular segment, 3) an outline of the textual materials gathered from local civic leaders for that particular segment, 4) an outline of the textual materials gathered from recreationalists for that particular segment, and 5) an outline of the textual materials gathered from residentialists for that particular segment. The quotes used in each of the geographic segment summaries are used for illustrative purposes, and are taken from the detailed analyses that follow those summaries. For example, if a quote used in the summary for Missouri River to Powder was provided by a *Richland County Agriculturalist*, the quote will also be found under the Agriculturalists Interest Group Analysis for that segment.

Primary Implications of the Yellowstone River Cultural Inventory--2006

Of greatest clarity across all groups is this notion: the Yellowstone River is the single, most important natural resource of southern and eastern Montana. Other conclusions can be drawn, but they can easily be challenged by evidence that demonstrates not everyone agrees. Moreover, general conclusions can simplify topics in ways that do not allow for nuances of understandings to be illuminated. Thus, even though the comments offered in this section are based on some overriding observations, they are not meant to serve as summations of how the people feel; rather, they are an attempt to offer resource managers some sense of the challenges that lay ahead.

Bank Stabilization: Along the course of the Yellowstone River, from the confluence with the Missouri River to Gardiner, Montana, rip-rap is a well-known method of bank stabilization. Across all interest groups, it is understood as a generally effective option for protecting property. Objections are raised by some, and alternatives are promoted by a few, but it appears that only one set of concerns keeps the majority of property owners from rip-rapping their riverbanks, the costs associated with rip-rap projects.

Put simply, the costs associated with materials and placements are viewed as prohibitive by many landowners. Stories of owners spending hundreds of thousands of dollars are commonly passed along as examples of why people have not rip-rapped their banks. Enthusiasms are sometimes diminished by knowledge gained from having watched the river “take what it wants,” even when rip-rap was already in place. However, rip-rap is considered a worthy effort even by those who doubt its overall permanence as a solution.

Permitting processes are understood to be time-consuming and frustrating. More than a few property owners simply do not “want the hassle of dealing with so many agencies,” and it is only those owners who hire someone else to deal with the design specifications and permitting details who are not overly offended by such requirements. Participants from all walks of life grasp the notion that pushing the problem onto your neighbor is not acceptable, but many people either implicitly or explicitly suggest that so long as one has

enough money to pay for the appropriate “engineering,” such issues can be resolved. While the permitting process is understood by many as a means of protecting neighbor from neighbor, it is seen as an impediment mostly working against the not-so-wealthy land owner.

Recreationalists discuss the need to avoid channelizing the river, but the cumulative effects of bank stabilization efforts are not topics that generate much conversation. Agriculturalists want to keep their productive lands, and residentialists, many of whom ironically value the free-flowing character of the river, want to protect their homes. Given that real estate interests are certain to push for continued development of residential uses near the river, questions concerning cumulative effects are likely to be even more pertinent in the future. Park County serves as the example to the entire valley. After major flooding events in 1996 and 1997, the number of people willing to put resources in to rip-rap projects increased dramatically and that community has since gone through extensive public debates regarding bank stabilization methods and cumulative effects.

As a whole, the people of Park County are well-versed in explaining the arguments for, and against, the further use of rip-rap as a means of controlling the river. Unfortunately, Park County also illustrates that even though community members can become rather sophisticated in their abilities to discuss issues, they probably will not reach a consensus regarding the best courses of action. The prolonged discussions of the Park County Task Force demonstrate that when “best practices” are not the best option for each individual, consensus is probably impossible and voluntary adoptions are perhaps unlikely.

Many property owners accept limits designed to protect neighbor from neighbor. However, they are resentful of rules that appear to privilege the wealthy, require of them a less-than-effective means of protecting their personal property, or are constantly changing. Resources managers should anticipate that as more property owners feel compelled to control the river, either because they can afford to do so as preventative measures, or because they feel immediately threatened, pressures to approve bank stabilization projects will increase. Moreover, because best management practices are likely to change over time, even at the local level, efforts to establish consensus agreements regarding such practices are likely to fail.

Efforts to engender wide-spread voluntary adoption of best management practices might succeed if individuals are convinced their personal interests are very well served, but resource managers must anticipate the objections that will be voiced and must generate the information needed to convince private owners that their interests will be served by the best management practices being advocated at any given time.

Riparian Zone Understandings: Ideas about, and observations of, the riparian areas vary greatly. Surprisingly detailed inventories of animal life are offered by many as, apparently, people often keep journals of their observations. Some people record their observations on a daily basis and some as a matter of taking their annual river trip. Many are committed to “knowing” the particular birds, beavers, and even bears of their area. Residentialists, in particular, pay a great deal of attention to the wildlife and the seasonal

migrations of birds and waterfowl. Agriculturalists and recreationalists, too, can offer extensive inventories of river animals. In these ways, the animals of the riparian areas are fairly well accounted.

With regard to the plants of the riparian areas, many people explain that they feel a great affection for the cottonwood tress. Many people are also aware of and concerned about invasive weeds. Agriculturalists and civic leaders seem to be the most informed. They speak of cottonwood trees as bank stabilizers and they identify specific noxious weeds and the strategies for dealing with them. However, knowledge across community members is not uniform, and people commonly complain about land owners who seem to be oblivious to the problems caused by lack of weed management. More than a few are disgusted by land owners who purposefully introduce Russian olive trees onto the riverbanks, and they are disheartened to see stands of weeds on river islands. In general, though, the plants of the riparian areas are seemingly less engaging than the wildlife. It was rare to find an individual with a journal chronicling the plant life of a given stretch of river, suggesting that plants are mostly taken for granted. For instance, only a few individuals express concerns regarding the age of the cottonwood stands.

It is only a few individuals in each geographic area that speak at length of the riparian areas as more than habitat for plant and animal life. For instance, only a few people explain that riparian areas can filter undesirable chemicals and nutrients out of run-off or irrigation discharge waters. Likewise, only a few explain that flood regimes are important to cottonwood tree regeneration. A few people discuss the impacts of grazing animals on riverbanks, but they seldom articulate in any detail the ecological impacts, positive or negative, of sediment transport processes. Least of all, individuals speak of hydrologic and geomorphologic processes as important to the health of the river. Those who have spent a great deal of time near the river are aware that the river is “constantly working,” and they rather vaguely explain that such workings are valuable in that they are natural. They offer few explanations of what those particular “natural” values might be. Attention to water quality is widespread, and many are concerned about the sewage contamination caused by inadequate treatment facilities, such as in Gardiner and on the tributaries.

The above observations suggest that much work is needed in educating the people of the river about the various functions of riparian areas. It seems that good riparian practices are currently, at best, a matter of attention to habitat. Specifically, it would be beneficial to help more people see the connections between wildlife abundance, clean water and healthy riparian functions. If more people were versed in explaining the linkages between wildlife, the physical processes, the plant life and the functions of the riparian areas, it seems many would be willing to protect those functions. As discussed above, voluntary adoption of best management practices must be attached to individuals’ self-interests. When they are convinced a particular practice is linked to their personal interests, vocational or vested, they are more likely to adopt it.

Managing a Shared Resource: The details of management concerns vary greatly across interest groups and across geographical segments; however, there is an obvious majority that regards management as essential to the long-term health of the river and its

resources. Virtually everyone agrees that management of the river is complicated work. Their priorities vary according to their personal and vocational interests, but everyone knows they share the river with others and that not everyone will get everything they want when they want it. As tempting as it may have been to overstate their personal needs, it seems generally true that the people of the Yellowstone River promote balanced approaches as the most fair when managing the shared resources of the river.

One specific refrain comes through with great clarity when asked about how authorities should balance the needs of the various user groups. Namely, the people of the Yellowstone River believe in local control. Agriculturalists, local civic leaders, and residentialists all call for local control of the river's resources. They express a great deal of faith in local control as they view it as balanced control. They worry that state and federal authorities are not "in touch" with local needs, and many people, recreationalists included, view state and federal authorities as "slow to respond." Recreationalists are perhaps the most likely group to call on state and federal agencies to defend their interests. Yet, recreationalists are not without sympathies for local interests and are among the first to argue for a clear sense of balance in protecting the river's resources.

Some participants indicated that they could trust local officials not to meddle and not to forget the needs of the local community. It seems people are more willing to trust their neighbors to protect their interests. Perhaps they regard local control as essentially less rigorous. If it is difficult to imagine neighbors attempting to control one another, then might the calls for local control simply be understood as calls for no control.

Fortunately, even a brief review of the comments from local civic leaders convinces the most cynical reader that local leaders spend far too many hours listening to their various constituencies, and far too many hours juggling and sorting the many layers of local, state and federal guidelines, to allow a local focus to exclusively privilege any one group's interests. Local civic leaders are excellent examples. They sometimes feel trapped between local needs and official rules, but they are, indeed, dedicated to balanced approaches. Many locals, from all categories, understand their communities cannot afford detailed analyses of river issues, and they understand that other communities need similar types of information. Local civic leaders explain that good information is critical both in making decisions and in upholding unpopular rulings. They willingly admit that they depend on other entities to supply information, and they stress the need for an entity that can serve as a clearing house.

Thus, while many of the people of the Yellowstone River opt for local control, they want state and federal agencies to provide information and guidance. Members of all interest groups indicate that they would benefit from an organization that would gather, distill, organize and disseminate information that could be understood and put to use at the local level.

Readers are encouraged to further their understandings of the people of the Yellowstone River by reading the river-length interest group summaries and the geographically organized materials found in the companion reports.

Organization of the Companion Reports

River-Length Interest Group Summaries—As noted earlier, comparisons were made across interest group representative from different geographic segments. In this way river-length interest group summaries were written for agriculturalists, local civic leaders, recreationalists and residentialists. As well, a detailed report of the Native American perspectives was constructed from the interview transcripts. Those five river-length interest group summaries are found in the following sections of this (in hand) volume.

Part I: Missouri River to Powder River—This volume includes the geographic summary for Missouri River to Powder River and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Part II: Powder River to Big Horn River—This volume includes the geographic summary for Powder River to Big Horn River and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Part III: Big Horn River to Laurel—This volume includes the geographic summary for Big Horn River to Laurel and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Part IV: Laurel to Springdale—This volume includes the geographic summary for Laurel to Springdale and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Part V: Springdale to Gardiner—This volume includes the geographic summary for Springdale to the boundary with Yellowstone National Park and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Agricultural Interest Group: River-Length Overview

Eighty-six interviews were conducted with individuals representing agricultural interests, including farmers and ranchers. Participants were recruited from referrals provided by the local Conservation Districts, the Yellowstone River Conservation District Council, and the Montana Office of Natural Resources Conservation Service.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|---|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Agriculturalists: Analysis Table

River-Length Concerns Among Agriculturalists

1. Land is Valued for its Productivity
2. Rural Life Valued as a Way of Life
3. Owning Riverfront Land is Risky
4. The Big Neighbor (the State) is Difficult
5. Rip-rap is a Worthy but Temporary Solution

River-Length Diversities Among Agriculturalists

1. Development Impacts Agriculture
2. The Viability of Agriculture is Threatened
3. Recreational Activities Compete with Agriculture

River-Length Specific Concerns Among Agriculturalists

1. Weeds are a Problem and We Need Help
2. Regulating the Flood Plain is Problematic
3. Water Rights May Not Be Secure
4. More Reservoirs Might Help
5. The Future of Agriculture

River-Length Implications of Agriculturalists Analysis

1. The Pressures on Agriculture are Real
2. Partnerships with Agencies and Other Interest Groups are Needed
3. Yellowstone River Conservation District Council has Credibility

Agricultural Interest Group: River-Length Summary

Introduction

A review of the interview data for this river-length summary suggests that agriculturalists share five common sensibilities when discussing the Yellowstone River. First, the Yellowstone River is valued for the productivity it supports on lands bordering the river. The water of the Yellowstone River is, and has been, essential to the agricultural community.

Second, agriculturalists love the rural lifestyle, the river and Montana. They are neighbor-oriented and respectful of others' private property rights. Because of this sentiment, agriculturalists believe that other users, in particular the recreationalists, also need to respect private property rights.

Third, owning and working the land along the river is risky. The cycles and variability of flows complicate their financial security. Stewardship is considered imperative and difficult.

Fourth, all riverfront landowners share one common neighbor, the State—its water, its wildlife and its various publics. Farmers and ranchers are skeptical of the management choices of this seemingly wealthy and powerful neighbor.

Finally, rip-rap is considered a worthy, but temporary solution for flooding. Rip-rap does protect land if done correctly, but agriculturalists know it can be quickly undone by flooding and ice jams. In the past, rip-rap was a “do-it-yourself” project. However, it has become costly and it is difficult to attain the appropriate permits. Rip-rap is known to sometimes divert problems to other properties, a fact that can cause social difficulties among neighbors.

Despite clear commonalities, agriculturalists express dissimilar opinions and beliefs based on their unique situations and geographic locations. There are three important differences across the river segments. First, agriculturalists experience different pressures due to residential and industrial development, and the differences are mostly dependent on the activities in the immediate geographic areas. In two segments, Missouri River to Powder River, and Powder River to Big Horn River, there is little mention of development. In the Bighorn River to Laurel segment, Billings' urban sprawl is a prominent topic of conversation. In the Laurel to Springdale and Springdale to Gardiner segments, second homes and absentee owners are bringing different values to the valley.

The second major difference among agriculturalists involves the different threats that individuals see in terms of their viability as agriculturalists. In the eastern segments there

are concerns regarding increasing interests in water conservation. Some agriculturalists are converting from flood irrigation to pivot-head irrigation, and others are concerned about what possible regulations would require them to do. In the western segments, the dominant concerns are related to the reductions in available productive lands as new owners are disinclined to lease acreages for farm or ranch purposes. This transformation is coupled with dramatic increases in land values, property taxes, inheritance taxes and a myriad of daily inconveniences such as increased road traffic.

Third, there are different types and densities of recreational activities across the five segments, each having different effects on agriculturalists and their communities.

Beyond the common concerns and diversities of opinions, there are five issues that seem to be most particular to riverfront agriculturalists. The first issue involves an apparent lack of effort, or success, by authorities and neighbors to eradicate noxious weeds. Salt cedar, leafy spurge, Canadian thistle, Russian olive, and spotted knapweed are all named as problems, and farmers and ranchers are unanimously concerned that their weed problems will only get worse.

The second anxiety is related to the federal government's management of the flood plain. Many express fears about the creation of new regulations or restrictions on agricultural flood plain activity. Such regulations could affect the individual's productivity.

The third concern is over the security of water rights. Changes in local and state demographic profiles are viewed with trepidation as agriculturalists fear that water adjudications could be affected. Fourth, agriculturalists often discuss the importance of storing water, especially as a means of keeping water for use in Montana.

Finally, when taking all the issues into account, agriculturalists worry about the future of their livelihoods. At stake is far more than family incomes. Agriculturalists view the threats as potentially impacting their communities, their heritage, their culture and America's food supply.

Taken as a group, the perspectives and concerns voiced by agriculturalists suggest that particular issues must be taken into account, both in the near future and in on-going resource management strategies. It is apparent that the agricultural interest group views the various pressures to be real and threatening. It is also apparent that the agricultural interest group needs to develop new and more robust partnerships with agencies and other interest groups.

Finally, it appears the Yellowstone Conservation District Council can play an important role in achieving constructive working relationships with the private agricultural producers that border the Yellowstone River.

Common Concerns Among Agriculturalists

The following concerns are common among agriculturalists, regardless of where one meets the individual.

Land is Valued for its Productivity: Agriculturalists view the irrigation waters as essential to the productivity of their lands. They are also sensitive to losing fertile areas near the river.

That guy, across the river there, he's farming, he's planting corn, and he's just three-quarters of a mile from me. He lives next to the river, he's planting corn there and he's thinking of this river to get water out of it, to raise...[his crop]. And he's looking at it [as] production only. That's what his land is going to sell for, based on production. And my land values are different....My personal values are different....When you lose that production value, you lose a lot of drive, and then personal pride. You know, it's not lazy, but you lose a lot. (*Prairie County Agriculturalist*)

Recreation is important. But it has nothing whatever in value compared to the high yield land and the farm possibilities on that river. And then the power generation, too; that comes from the river. (*Custer County Agriculturalist*)

There are a lot of people that are buying land on the Yellowstone now, not so much, say, from Big Timber down, but from Big Timber up. A lot of them are buying the land and they're not doing anything with it. Either irrigating it or not much at all, letting it just go back to wild....It ties up a lot of land that used to be available for leases or for grazing or something like that. And it makes that much more competition for the land that is available to lease. And it drives the price up a lot. Sometimes it doesn't even pay to lease it. (*Stillwater County Agriculturalist*)

Some of the land we leveled ourselves. We have two scrapers and we leveled quite a bit of the land ourselves. By leveling the land and making the irrigation more efficient, it accomplished two things: the land became more productive and we were able to use much less water. (*Yellowstone County Agriculturalist*)

I'd say we've lost...about a half a section....I'll bet we've lost seven acres, at least, from that little pretty bottom area down there,...probably six acres. It was only aesthetically valuable; agriculturally it didn't cost anything. (*Park County Agriculturalist*)

Rural Life is Valued as a Way of Life: Agriculturalists embrace a rural life-style. They are neighbor-oriented, enjoy the quietude of rural life and are respectful of the privacy and property of others.

It's just beautiful. It's like a huge greenhouse, basically. You know everything is green, and everything is clean. You know, we really take pride in this valley.
(*McKenzie Country, ND Agriculturalist*)

One thing we have...is an irrigation ditch association, so we're bonded all together on this ditch. And it's for everybody's benefit that things are done well and right. (*Rosebud County Agriculturalist*)

You've got to allow the owner of the land to do what is in his best interest and the land's best interest. And if you start stepping on that, then you're violating their property rights and their personal rights, and that isn't quite what this country was founded on. (*Yellowstone County Agriculturalist*)

I like it here....I never wanted to do anything besides be a farmer or rancher.
(*Carbon County Agriculturalist*)

There is a relationship that forms working with the land. You learn to love it, and it becomes part of you. It becomes part of your character. It has some very formative influences on who you are. It becomes part of your soul. I think of the legacy and the heritage. Our kids understand that formative influence on their character. This place defines who they are. (*Park County Agriculturalist*)

Owning Riverfront Land is Risky: Agriculturalists are aware that owning and working the land along the river is risky and that they are not blessed with financial security. Stewardship is considered critical, yet the economies of agriculture do not allow for environmental altruisms:

I noticed that the river has probably come in 100 feet, and I've lost property down here. I have the river coming in, and it's sort of making another channel. It's taken quite a little property, the erosion. But I haven't got any qualms about that. I know living here that we're going to have to put up with some of that. (*Dawson County Agriculturalist*)

The erosion is a big one. You can't believe the erosion. I will take you right over to it over there. There is a house over here. We rented that piece of ground when I was in high school. That was 80 acres and there is maybe an acre left. That...[happened over] 40 years. (*Treasure County Agriculturalist*)

Agencies say the rip-rapping isn't worth the investment. But once a piece of productive land is gone, there's no revenue from it. It isn't just the revenue the farmer [lost]....[Farming] supports a lot of businesses in the community....It's a hard thing to figure. The land might have been worth \$1,500 to \$2,000 an acre...but when you figure the production over ten, 15, 20 years, it grosses a lot....And it takes hundreds of years to get it back. (*Yellowstone County Agriculturalist*)

I never know where my property line is at....The river takes a little every year. In real high water years, it's more aggressive. It takes fertile soil real fast....I'm not whining, I'm resigned....I've resigned myself to this in sadness. (*Stillwater County Agriculturalist*)

Some of the people have told me, 'You are never going to win against the river,' and I think that is probably true. As an agriculturalist, I don't deny that that is going to happen. Mother Nature is cruel, tough and hard. If I didn't do anything because I was afraid my crop would freeze or flood then nothing would get done. You gather up and do the best you can, and you might fail. She might cut you down. (*Park County Agriculturalist*)

The Big Neighbor (the State) is Difficult: Agriculturalists who own property along the river have a politically and financially powerful neighbor, the State of Montana. As compared to other agriculturalists, they must interact with far more agency personnel. The 310 bank stabilization permit process stands as a fitting example of the networks of persons, paperwork, regulations, and reports that must be navigated in order to do what previous generations of agricultural producers simply went out and did. For example, one agriculturalist counted interactions with 31 different agency persons in order to get approval of his bank stabilization permit. No one argued it is likely to get better in the future. Farmers and ranchers are skeptical of the management choices of this seemingly wealthy and powerful neighbor. Even those that participate in local groups, such as the Task Force in Park County are skeptical (see Part V for complete description of Task Force):

They fooled with the river...[when] they put the jetties in, and that stuff. You'd think now that they fooled with Mother Nature, somebody should be committed to keep it from washing....They should...[see] to it that it don't wash....If [the jetties] were put there, they should have been maintained....I've had it stuck in the back of my mind, but I don't know who a guy would see [to have it looked into]. The Corps of Engineers? (*McKenzie County, ND Agriculturalist*)

I do know that I consider the riverbed not mine, I consider the river not mine and I consider up to the high water mark not mine. Like when the water is running right now in the June rise, everything above that is mine, everything below that is the State's or [it's] Federal or [it's] the people's. (*Custer County Agriculturalist*)

I own this property, and the State owns that river. I understand that and I am perfectly fine with it. I can't go out in that river and mess around, because that is the State's. So, I think the State should have to keep that river off of my property, too. If I can't mess with the river, why can the river mess with me? (*Yellowstone County Agriculturalist*)

I've worried a time or two about some of these regulations that the government has on it to where you can't get some very simple things done in a timely fashion. By the time you wrestle with them, why, the condition has changed, or gotten

worse, or whatever. That would be one of the complaints:...by the time you deal with all these government agencies, you can get a little bit goofy, you know. And then you get disgusted, and then you get discouraged, and then you quit,...[and] just say, 'The hell with it. They're going to do what they want to do anyway'....But there's got to be communication. There's absolutely got to be communication. And you've got to have it from the engineer, and the hydrologist, and the old farmer/rancher, and grandma and grandpa, and everybody. And you got to talk about it, and discuss it, and see what you can come up with. That's just that simple. (*Stillwater County Agriculturalist*)

It's the people's river. So, that is what got me on the Task Force in the first place....If my dog goes over on the neighbor's, and causes difficulty, it is my responsibility. If that is the people's river, it is their responsibility to keep it within the bounds. (*Park County Agriculturalist*)

Rip-rap is a Worthy but Temporary Solution: The historical approach to living with the river was simple, don't build too close to the river. By keeping one's investment out of the flood plain, one minimized losses due to flooding. However, flood plains are used for productive purposes, and agriculturalists suffer real losses when their properties are washed away. Rip-rap is known among agriculturalists as a temporary solution for flooding. It protects land when correctly applied, but it can be quickly undone by flooding and ice jams. Rip-rap can also divert water to your neighbors' land. Rip-rap has become costly, and it is difficult to attain the appropriate permits:

I am not the expert, but I have lived here, and I have seen the river do some strange things. It may work for a few years if you do it right, but you could get a bad year, and it will wash it all out. (*Dawson County Agriculturalist*)

In my opinion, most of all the rip-rap projects...have been done wrong. It's because people have not taken the time to assess, 'What am I doing? What do I want this to look like? and What are the true reasons [why] I am doing this?' You know, if you analyze all those things before you go in there,...hopefully you'd come to the realization that you'd give the river some room, so that when it comes its day in June that it needs to go over the banks....It has...[somewhere] to go. You could stack the dirt up 40 feet high and just keep narrowing it up. Well, the river is going to rev up so fast that Jesus Christ himself couldn't stand on the bank and keep the bank from disappearing....I mean, we've just got to pay attention. (*Prairie County Agriculturalist*)

They rip-rapped the whole thing, and it...[sped] up the river [so] that it created a whole wet land where ever it wasn't rip-rapped you know, and it came out, and that's what the rip-rapping does. You know, before there was any of that, it had spread out a little bit everywhere and it would fill channels and fill sloughs along the way. And I think that filling those sloughs and the channels during high water is what helps to recharge the river in the wintertime. Because the river in the wintertime is lower than I've ever seen it last year. And it just seems like it keeps

getting lower. And I think a lot of that's due to those sloughs and things not getting filled from flooding. (*Stillwater County Agriculturalist*)

Water finds its own level, as you're well aware, and that's what the Yellowstone will do. If you stop it from meandering [in one] place, it's going to meander someplace else. (*Yellowstone County Agriculturalist*)

Some of it was rip-rapped before we came. I know it is a controversial thing. You rip-rap here, and the water hits it and sends it across the river, and it does more damage to the guy that lives next door. You are sending the problem further down the river. I am slowly learning that...[but when] you see your own land disappearing, it is hard. (*Park County Agriculturalist*)

Diversities of Opinions Among Agriculturalists

Among agriculturalists there are a number of topics that generate diverse opinions. These diversities can occur among immediate agricultural neighbors, but they are more likely to appear as differences along the length of the river.

Development Impacts Agriculture: The rise of professional economies brings new people to the Yellowstone River Valley, many of whom wish to locate their residences near the river. The resulting residential developments are relatively expensive investments that result in rising property values, in rising taxes and an increase in the total number of people that use the river. Some agriculturalists accept that the Yellowstone River valley is no longer hidden. It is no longer a secret to recreationalists, vacationers or second-home buyers. Agriculturalists also worry that these newcomers are simply drawn to the river's beauty and that they lack the necessary respect for the river and its capacities. As well, the newcomers often have little understanding of rural communities, practices, norms and agricultural operations. Almost all agriculturalists noted these different attitudes, values and beliefs that have arrived with the second-home owners, retirees and (often) former urbanites. Almost all are attempting to adjust. The different rates and types of development affect agricultural practices in distinct ways:

I just like living here. The best thing about this country is there's nobody here....It's just being able to do something without people around you all the time, you know. Like, when you're traveling, or in the cities, [and] you want to turn around but there's always a car coming, there's always someone. You get out on these roads, and go. You got to look, but it's just something not having someone watch you all the time, just being able to be a little more of a free spirit....It's just nice to be able to do what you want. You want to take a leak? You do whatever you want to do. (*McKenzie County, ND Agriculturalist*)

Our community is kind of dying. The high school has 30 students. The town is turning into a retirement community. There is nothing to keep the youth here. It is a typical Eastern Montana town. Hunting is getting to be a big deal. We are

getting a lot of non-agriculture people buying for hunting. It is hard to compete when you are trying to make the land pay. (*Treasure County Agriculturalist*)

Down around Columbus, you start getting into row crops, and corn, and beets, and into a lot more expensive land—a lot more productive land....We've got to protect some of that. Urban sprawl is taking that out. (*Yellowstone County Agriculturalist*)

It's changing rapidly....I was talking today to a man selling his ranch who has two offers on it right now. And I think that a lot of people don't realize how quickly it's changing....I think Montana needs to decide, do they want tourists?...Montanans need to sit down and decide the future of Montana, [and] plan it. What do they want it to be? Want it to be this? How do you keep it this way, or make it this way?...It's going the other way....[Montanan's have] got to be the author of the future. They've got the opportunity, now, because it hasn't been ruined like many places in America....Seize this opportunity, and do it together, work in a cooperative way, and work out the future. Well, that's a lot to say,...[and] hard to do. (*Sweet Grass County Agriculturalist*)

There used to be 65 or more different ranches in this valley. Now there are probably 15, and the population along the river here has increased dramatically. (*Park County Agriculturalist*)

The Viability of Agriculture is Threatened: There are various threats to the viability of agriculture that appear to be immediate:

In ten years, I foresee that irrigation will be different. There's going to be a lot more conservation as far as water. You're going to see a lot more pivots. I don't think you'll see this [flood] irrigation system like we have here. I really don't....If everybody had a pivot, and it worked, there would be no drains at all and there'd be very little water coming. I mean, there'd be a third of the water coming down that big canal. (*Richland County Agriculturalist*)

We are third and fourth generation. We are farmers and we are stewards of the land. We don't really want to give that up....People from other places come in and the land here is cheaper and a lot of places are getting bought up. People come to hobby farm, not to invest. It drives the prices up. The second, third and fourth generations are in jeopardy. It is financial. (*Rosebud County Agriculturalist*)

The prime agricultural land that's down along the Yellowstone...should be prioritized for protection. (*Yellowstone County Agriculturalist*)

I hate to see the way it's going up, not just up here, but when you get down to Billings, and it seems like Billings just keeps creeping west farther and farther, taking valuable farm land and really putting some people out of business just

because of zoning. And, all of the sudden, they were in agriculture trying to grow crops and they're having to pay taxes and you know they are a lot higher than they used to be, and they just can't afford it. (*Stillwater County Agriculturalist*)

We've become a minority anymore it seems, and it's pretty tough. We don't have near the money that these other organizations can put together, and some of these battles get kind of tough. I know that when that Task Force deal was going, there were things said....They said, 'Well, the ranchers are on the way out—deal with it'....I guess we're not ready to hear that. (*Park County Agriculturalist*)

Recreational Activities Compete with Agriculture: New populations use and value the river differently than agriculturalists. These groups shift the cultural significance and meaning of the Yellowstone River away from historic production values. This evolution of the river's cultural meaning seemingly competes with agricultural values. Furthermore, various environmental and watershed organizations are seemingly successful in exercising political power. These organizations seem to promote non-production-oriented relationships with the river. The members of these organizations appear to invest financial resources and personal time in proactive efforts that influence policy decisions.

One agriculturalist noted the lack of participation by his peers and was shocked that “real estate people” were the ones participating in public forums and planning boards. Across the geographic segments of this study, agriculturalists offer somewhat divergent concerns regarding the degree to which recreational interests are considered competitive interests:

Occasionally, you'll see boats. That's always kind of a highlight when you're down there hanging out, to see a boat or a raft go by. You wave; they wave back. (*Prairie County Agriculturalist*)

I get a little pleasure watching people hunt and fish and enjoy themselves. [Maybe] get a deer or a big fish, or a big agate. It's kind of neat. We enjoy campers, too, because we'll go down there and pester them. Make them feed us. (*Custer County Agriculturalist*)

You can go to a Montana farmer and rancher, not to the New York boys or the Californians that have bought [land], but go to a Montana farmer or rancher, and you ask permission to go hunting or fishing, and nine times out of ten you're going to get that authorization. (*Yellowstone County Agriculturalist*)

Recreation is coming on faster and faster; every year there...[are] more boats. In fact, I wonder sometimes if it's going to get to where it has so many boats in some places that they'll have restrictions for motors, and it'll be just float boats. I think maybe in the future, something might happen like that, just because of the impact and the noise. I don't know if it will, but I look for something like that maybe to happen. (*Stillwater County Agriculturalist*)

We are almost a bedroom community to Bozeman. And, as fishing becomes more popular, we'll see 20, 30 boats go past here in a day at least. That's a lot. And fishing is [meant to help people] get away from crowds....[They] don't want to play bumper boats. (*Park County Agriculturalist*)

Specific Concerns Among Agriculturalists

The concerns identified here are, more or less, specific to this interest group. In most cases, the issues are linked directly to the vested interests of these individuals as agriculturalists.

Weeds Are a Problem and We Need Help: Invasive weed management needs to be a shared responsibility, involving upstream and downstream neighbors, as well as private and public entities. It must be given more priority as a problem:

This salt cedar, or Tamarisk, or whatever it is....You lose your willows when that stuff comes up. It's not a vegetation that's edible for wildlife or anything, so you're going to lose in every respect....And that's what's going to be some of our biggest problems in the next few years. (*Dawson County Agriculturalist*)

The salt cedar and stuff like that—I'm sure that I'm not the first one that's mentioned salt cedar. It's a big problem. It hasn't been, but it is now. You've got the Canadian thistle; you've got the knapweed. You've got everything coming down the river....It's getting down here and it's coming down the river. (*Rosebud County Agriculturalist*)

The County came out here, and they told us all these things we needed to do [about the weeds,]...or they can come out and spray it and charge me money. I told them, 'You go up to the head of the Yellowstone River and you kill all the knapweed and spurge down to me, and then I will kill mine, and then you can go on down there. Until then, there's nothing we can do about it.' I can...show you every place that river has ever overflowed—it just spreads them weeds, and that is exactly where the knapweed and spurge is. (*Yellowstone County Agriculturalist*)

I have to tell you, the first 20 years I spent a lot of time spraying but you never seem to get ahead. So the sheep we're putting in now will be eating the spurge. Frankly, the spurge beetles we put out in some parts of the ranch have gotten rid of 95 percent of the spurge; in other parts of the ranch, I can't tell that they've made any difference. And I'm sure it's just a difference in habitat. The island right across this channel right here, we can look at it when we get done, but this time of year there would just be a field of yellow with all the spurge. And we've put some beetles over there, and it got rid of 90 percent of it. I don't quite understand why it worked there and it doesn't other places. But bio controls make a huge difference. Not only that, they're really cheap. (*Sweet Grass County Agriculturalist*)

Weed control becomes an issue...because when the floods come, we get the weed seeds [coming from the National Park]. Even fishermen who use the river on a regular basis are bringing weeds along with them from wherever they have been. I would like to see the fishermen that park on the islands for lunch go pull weeds and share in the responsibility. (*Park County Agriculturalist*)

Regulating the Flood Plain is Problematic: Agriculturalists express a number of worries over governmental regulations related to the flood plain:

I've heard 'corridor,' ...and I don't know what the actual measurements would be. I've heard they want to establish a corridor five miles from the river in each direction where everything's protected. What a bunch of crap that is! That's what worries people. If they did that, they'd have control of this entire place, and you wouldn't be able to do anything. You hear of these Heritage River deals, where they come along and see a house that you can see from the river, 'Well, you've got to take it down.' They can really shut you down. I think that's what a lot of...[environmentalists] want. And, the really radical ones, they don't care if I'm here or not. They couldn't care less about me, or anybody like me. They'd like to see us gone, actually. They'd like to see a buffalo range, and me in a sustainable village doing something that the government mandates that I do. (*Dawson County Agriculturalist*)

When you...mention a river corridor, I think there's going to be a 'dam' police here. That's my honest opinion....I mean, if they put an interstate through here, well, the first thing they'd do is they'd get to put a highway patrolman here. I don't want you to think I'm an outlaw or anything, but that's what I think of. (*Prairie County Agriculturalist*)

As I understand it, they want to take land from the landowners along the river and make this river corridor. Let's say they have a corridor of a quarter-of-a-mile wide. That would take a good share of our productive land. I object to that. That's how we make our living. Then let's say the river continues in its wild, untamed fashion and it washes into that corridor....They'll want another quarter-of-a-mile. (*Yellowstone County Agriculturalist*)

[Concerning public access,]...the courts took our riverbank without compensation. (*Stillwater County Agriculturalist*)

I think the majority of the people would like to see more legislation or regulation along the river flood plain area. And I think that in this study the state conducted...they put a hell of a lot of land in the floodway and the flood plain. It encompassed a huge area, and I think that their numbers were jaded. They used a method of finding elevations, which I think was sort of arbitrary. I don't think it was scientific and accurate. I mean, we should be underneath the Yellowstone according to their maps, [but] we've never had water flowing through here. (*Park County Agriculturalist*)

Water Rights May Not Be Secure: As communities grow and change, water needs also change. New demands on the water resources suggest that the water rights of agriculturalists may not be secure:

It's used for barge traffic...[but] why should Montana lose [its] water when it's Montana's water to start with? There should be more control left to the states to control their own water. (*Dawson County Agriculturalist*)

With the water and the amount of people that there is anymore, we're more in jeopardy of losing our water rights, so we need to keep our water rights....A lot of your downstream people come up with some idea [that] this water is theirs, too. They pay taxes. They're a citizen of the U.S. We need to keep all of it here that we can, for development and agriculture and those types of things in Montana. (*Rosebud County Agriculturalist*)

Sure, they want our water. They need it for commerce downstream. And now we have the environmental sector,...the tree-huggers from back east, and the Fish and Game has gotten involved....And it's almost a sacred word, 'Don't touch our Yellowstone.' Well, wait a minute here. God put that water here for it to be used. (*Yellowstone County Agriculturalist*)

Being an Ag individual,...of course I'd want agriculture to have a priority. But I do know from when I was on a Conservation District, that drinking water comes first, then Ag water, which kind of makes sense, too. (*Stillwater County Agriculturalist*)

I think it's important to be able to continue to use the water from the Yellowstone. Our livelihood depends on our water rights from the Yellowstone River. That's a pretty important issue to me. Then I think keeping the wide-open spaces is important. Because without cropland, we'd be out of business here....Instead of mowing hay, we'd be mowing lawns. (*Park County Agriculturalist*)

More Reservoirs Might Help: Many agriculturalists bring up the idea of more water storage, especially as it could be done with reservoirs. While they seem to be generally in favor of the idea, many are certain such plans would not come to fruition and at least a few are not certain reservoirs would be especially helpful:

Down around Scotts Bluff and Mitchell...they irrigate out of reservoirs, but they were out of water. (*Richland County Agriculturalist*)

I think just keeping water back, like that Yellowtail Dam is the best....We've talked about putting in reservoirs...upstream to hold back some of this water....It's a good idea, everybody likes it, but it's who's going to stand the expense to put it in? We feel that it should be the Corps of Engineers, because they seem to have pretty much the say-so....I can't think of anybody who would

object, because we [would] have recreation on that reservoir—fishing, boating.
(*Dawson County Agriculturalist*)

We have had a lot of flooding, but not in the last few years. It's been pretty good. Depends on how they operate that Yellowtail Dam....If they wait and release water when this Yellowstone is high,...it floods....Last time they did it, they flooded everything. They waited until June, which is our high water time anyway. And they opened that thing up. We lost a lot of crop. Water...sat out there for two weeks; not only that, but it changed the whole channel of this river completely....They never should have done it....They probably have caused more erosion than all the farmers could cause in the next 100 years. (*Rosebud County Agriculturalist*)

[In order to have a lot more water] you'd have to build a dam up in...Paradise Valley or somewhere up in there. And that is such a beautiful area, you'd hate to see that lost....I'd have a lot of misgivings in this day and time. At one time, I was real strong in favor of it. I think it is important for future generations. You know, I suppose that's as important as the land we irrigate now, [but] we already can overproduce what we sell. So, it's hard to say. (*Custer County Agriculturalist*)

I think it is too bad we can't divert it somehow, the high water, and put it to use. Once it leaves this state, it is gone. I think we could develop more agriculture if we had some diversion. I'm not sure how'd you do it. Maybe it would take a dam and that would be pretty hard to do anymore. (*Yellowstone County Agriculturalist*)

I think there will always be plenty of water in the Yellowstone until late in the fall. There will be some shortages that show up in the fall, for irrigation mainly. The river gets so low then that people have to pump and that is expensive. I don't think they will ever put a dam on the Yellowstone. I think there is too much public pressure. The only thing is, if they could divert some of the high water, and use it when the river is low. I don't know anybody that is in favor of a dam. (*Yellowstone County Agriculturalist*)

The dam is a way to control the water, but I personally don't want to see a dam on it, especially if it's up above me. If they're going to build one, then build her on down the way. Hopefully this place would remain an area that would benefit the wildlife, and we can get along without setting right on the river's bank, you know; we can live without doing that. (*Stillwater County Agriculturalist*)

I think there could be some small dams and things like that to slow the run-off, and maybe support some of the streams a little better. You know, the smaller streams. And I think that would help control a lot of it. (*Sweet Grass County Agriculturalist*)

I think there are some things that could be done, not particularly to the Yellowstone, but to the tributaries of the Yellowstone to conserve water so less water would need to be taken out of the Yellowstone. We have several streams on us, [and] if we were allowed to dam up the stream to build up a reservoir,...there would be less water drawn from the Yellowstone....Most of [our] water would be [drawn from] the reservoirs [that] would fill up during run-off time. (*Park County Agriculturalist*)

We need some off-stream storage. We need to preserve some of this water. There's times when this river runs [very high]. And the climate is changing; we know that. And the run-off is coming a lot quicker than it used to. It used to be the river held up until August. As it is [now,] it starts to go way down in the first of May, June and July. (*Park County Agriculturalist*)

The Future of Agriculture: The agricultural way of life is more and more difficult to sustain. Impacts are felt from increasing residential and industrial development, rising property taxes, falling and instable commodity prices, increasing costs of equipment and fuel, and the rise of the recreational tourism, to name a few:

I've already told my son that he'll be going to college and that I'll be the last generation farmer. I won't put him through that. It's too tough, way too tough. I mean, you already see the decline of farmers. It's sad....I mean, unless something changes,...you can't make it. You just can't. It's a struggle....We'll rent out....Some days, I wish that I wasn't here but there's that dedication thing in there. (*Richland County Agriculturalist*)

I think it's all going to be corporate-owned and tenant-farmed, that's what I think is going to happen. Because there is a lot of money out there, but it's not in agriculture. And these people coming in, buying this land, are not buying it with money they made in agriculture, unless they sold a place in California and bought some cheap land in Eastern Montana. It's an investment; it's not going to work to buy it and pay for it and stuff. (*Rosebud County Agriculturalist*)

The biggest problem that I think is going to be faced on the Yellowstone is ignorance of the natural process, and bad practices. They blame everything on the farmer and rancher. Well, there aren't many left....Those guys [still farming] are getting old, and they're selling off. (*Yellowstone County Agriculturalist*)

Land prices are going up all the time. It is tempting for people to sell....You can't buy the land and make it produce enough to make payments. That is changed in my lifetime. (*Sweet Grass County Agriculturalist*)

We've looked at our inputs, such as fertilizer and fuel going up a third or more in one year. That's a pretty big hit for a small business. We don't have anyone to pass that along to. Our prices are pretty much set. We sell at what the market

offers us. And in a business where the margins are pretty slim, it makes a big impact. I don't know how long Ag will be viable. (*Park County Agriculturalist*)

Implications of Agriculturalists' Perspectives

Taken as a group, the perspectives and concerns voiced by agriculturalists suggest that particular issues must be taken into account if resource management strategies are to be successful.

The Pressures on Agriculture are Real: Agriculturalists along the Yellowstone River face a challenging climate, changing social and political landscapes and a myriad of economic difficulties. They depend on the river for irrigation, but many agriculturalists are concerned that when they attend public meetings they feel horribly underrepresented. One participant was upset when applying for a rip-rap permit because he had to attend a series of public meetings. He expressed his frustration this way:

I don't want to be a public person. All I wanted to do is ranch and do my thing. I had no idea I would become a public figure. (*Park County Agriculturalist*).

There is a heritage among agriculturalists that promotes a spirit of independence, a commitment to individual rights and a desire to minimize regulations. This heritage is rooted in a historical context that more or less demanded such values. In particular, none of the homesteaders would have been successful if they had not embodied at least some of this spirit. Today, however, some agriculturalists recognize that those who wish to be self-reliant may, ironically, jeopardize that wish simply by exercising it. If agricultural interests are detached from recreational, municipal, and residential interests, by virtue of standing apart they may become victims of their self-reliance. A handful of agriculturalists have resigned themselves to this irony and are attempting to understand the common interests that are exposed at managerial forums.

Numerous agriculturalists noted that it is essential that agriculture's interests be represented in the public forums and decision-making bodies. To remain an active member of any citizen group is always challenging. Providing for one's family and actively maintaining a farm or ranch are full-time responsibilities making those agriculturalists who recognize the importance of involvement, and who are willing to be involved, invaluable to the community as a whole. The uncertainties of commodity prices, the rise of land prices, the accompanying increases in property taxes and the increasing costs of operation may not, in the long run, determine agriculture's viability. Rather, it may be a function of whether or not agriculturalists are actively and constructively involved in public managerial forums.

Partnerships with Agencies and Other Interest Groups are Needed: Large-scale agricultural operations along the Yellowstone River are advantageous to many constituencies beyond the agricultural community. A hayfield better supports riparian functions than a housing development. Recreational users prefer pastoral scenes, and residentialists regard the rural landscapes as the heart of the appeal when deciding to live

near the river. As well, agriculturalists have local and historical expertise from which resource managers can benefit. It seems, then, that a number of partnerships between agriculturalists and other constituencies would be forthcoming. Unfortunately, a great deal of mistrust exists among agriculturalists with regard to these other entities. These mistrusts must be addressed, both from the outside and from within the agricultural community if the interests of agriculturalists are to be protected.

It takes very few negative encounters between agriculturalists and agency personnel to severely damage the credibility of an entire governmental agency. Moreover, broadly held negative attitudes result when agriculturalists share the stories of this negative encounters. It matters little whether or not the agriculturalist telling the story was directly involved. Agency employees should make themselves aware of historic troubles, and they should assume that many agriculturalists distrust government. Every interaction is an opportunity to build a lasting relationship, but it may be that negative feelings are already at the base of that relationship. Also, agriculturalists' describe their approaches as based in common sense and economic feasibility. Yet, their comments suggest that agency personnel are not always successful in making technical information valuable. Information packets and presentations are often laden with jargon and sometimes seem completely irrelevant. When government-endorsed practices are costly, time intensive, and/or seemingly irrelevant, the likelihood of adoption is slim.

It is important that agriculturalists also attempt to remedy relationships with agency personnel. This is especially critical if agriculturalists hope to find agency support for programs and policies that contribute to the viability of the agricultural sector while protecting the broader resources. Agriculturalists should demonstrate their commitments to stewardship. They should look for and voluntarily adopt practices that protect the river's resources. By doing so, agriculturalists will build a positive base for partnering with the various agencies. The goal should be to establish mutual understandings of the biological resources, the economic realities, and the pragmatic limitations of managing and sharing the river.

In some areas, riverfront properties are becoming quite valuable. The ranches and farms of the river create sublime backdrops that entice many people to purchase land on the river. The enormous profitability of selling property for developmental purposes is in stark contrast to the virtual non-profitability of producing livestock or crops. Many agriculturalists are resigned to the idea that their retirements depend on the eventual selling of their properties. They only hope that they will not need to sell it all. For most, the anticipation of a handsome profit is little comfort for the cruel irony of their situation. Namely, riverfront agriculturalists survive only so long as they are willing to subsidize the sublime.

In some areas, developmental activities have advanced to the point that environmental and recreational groups now decry those activities. They appear to be ready to assist in the preservation of agricultural activities. Yet, little progress has been made in building partnerships. From the agriculturalist's perspective, the prospect of saving the farm for environmental or recreational groups is no more appealing than saving the farm for the

pleasure of the residentialist across the way. Furthermore, if saving agricultural lands means that the agriculturalist must forfeit the opportunity for a secure retirement the plan may as well be nonexistent for all of the support it will garner. A successful partnership between agriculture, recreation and environmental groups will need to be based on innovative programs that allow agriculturalists to maintain their lifestyles and that allow them to participate in and benefit from, the preserved value. Those who wish to preserve the sublime must not ask agriculturalists to subsidize the view, and agriculturalists should recognize that a guaranteed future is unlikely. Recreationalists may be willing to support creative programs that ensure against the riverbank being cluttered with houses, but the carpenters and plumbers who fish the river wonder, too, how they will afford retirement.

Yellowstone River Conservation District Council has Credibility: Agriculturalists express a growing need for educational resources, and they refer to the Yellowstone River Conservation District Council as a source with a great deal of credibility. The Council is positioned to act an informational source, a translator, a liaison and a sponsor of research activities.

A key effort would be to promote and further develop a river-length invasive weed management plan. Agriculturalists and many residentialists identified this as a high priority, especially in terms of leafy spurge and spotted knapweed. When upstream neighbors do not manage weeds, because of ignorance, disinterest or absence, the downstream landowner suffers. Many agriculturalists willingly put in time, effort and money into managing their weeds, and they have come to know which strategies are working and which are not. The Council could function as the clearinghouse for advice, innovations and best practices. It could identify impediments to full compliance and develop strategies for targeting negligent landowners. Simply providing a list of local advisors might be helpful. Unfortunately, many agriculturalists noted that areas of State land, especially islands, and Federal lands, such as Yellowstone National Park, are not managed for weed abatement. If the Council could function to demand better management of weed control on those lands, individual property owners might be more willing to engage in the prescribed best practices.

The Council should disseminate information about bank stabilization methods, permitting processes and flooding. Convention and convenience have convinced many agriculturalists that large and bulky rip-rap is the only means of effective bank stabilization. Alternative methods, such as weirs and bank sloping, have worked in some areas but are known to a very few people. Many agriculturalists view the permitting processes as an impediment only. It clearly prohibits the traditional do-it-yourself approach, and it seemingly introduces unreasonable costs. A few landowners discussed the need for better understandings among agriculturalists of the benefits of flooding. One agriculturalist wondered whether or not there were ways to encourage the benefits of flooding while preventing major damage. These discussions suggest the need for the Council to make a concerted effort to address concerns about the cumulative effects of bank stabilization projects and best management practices for living with a free-flowing river.

Agriculturalists expressed a need for better informational guides for newcomers and recreationalists. For newcomers to an area, they suggest such resources should include information about river safety, access points, high water demarcations, private property rights, local manners, and customs, flooding potentials and weed control responsibilities. They see a need for recreational maps to include information about access points, private property holdings, local conventions, codes and laws. The maps provided by Montana Afloat and in the BLM Floater Guide are good models but they are either incomplete or not widely distributed. The Council could publish a series of information guides that address the river as a whole and that include community-specific information. If communities or groups have already developed guides, the Council could assist in updating, refining and disseminating the information provided.

Finally, because the viability of agriculture and the management of the Yellowstone River are intertwined, the Council, among its many research agendas, should continue to sponsor activities that are meaningful to the agricultural community. Beyond research project that will help agriculturalists understand the physical processes of the river, the Council could investigate and provide guidance for understanding tax shields, open space programs, Farm Bill legislation, and water quality trading programs, and recreational revenue streams that have minimal impact on traditional agricultural activities. Agriculturalists trust the Council to understand their interests, and they trust the Council to promote innovative approaches that have a common sense base. It is worth noting that the Council stands apart from the greatest concern voiced by agriculturalists:

There are too many people [who] are too far away from having a little dirt under their fingers from working the soil, and they just don't understand exactly what all of this is. (*Yellowstone County Agriculturalist*)

Local Civic Leaders: A River-Length Overview

Sixty-eight interviews were conducted with individuals holding civic leadership positions, including city mayors, city council members, county commissioners, flood plain managers, city/county planners, and water/wastewater treatment managers. Participants were identified through public records. In a few instances, individuals were identified as local leaders even though those communities have no formal local government.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|---|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Local Civic Leaders: Analysis Table

River-Length Concerns Among Local Civic Leaders

1. The River is a Resource for the Community as a Whole
2. Good Information Helps
3. Local Needs are Various and Must be Balanced
4. The River provides Water but Can Threaten Health and Safety
5. Sympathies for Agriculture and Recreation

River-Length Diversities Among Local Civic Leaders

1. Valuing Private Property Rights and Public Rights
2. Local Economies and the Future
3. Managing for the Future
4. Help is Needed with Noxious Weeds

River-Length Specific Concerns Among Local Civic Leaders

1. Philosophies About Government
2. The Challenges of Local Citizenries
3. Connecting Local Government with State and Federal Entities
4. Flood Plains and Official Designations

River-Length Implications of Local Civic Leaders Analysis

1. There is a Need to Generate and Share Good Information
2. There is a Need to Help Local Officials with Complexities
3. With Limited Resources Everybody Will Not Get Everything They Want
4. Governance and Regulations Will Require Multiple Strategies and Coordination

Local Civic Leaders: A River-Length Analysis

Introduction

The local civic leaders interviewed for this project were a diverse group of individuals, and many of them could have served as excellent representatives for the other interest groups, meaning they often also had vested interests in agriculture, recreation and/or residential concerns.

Even though local civic leaders sometimes have particular personal interests, and even though they represented twelve different counties, a number of municipalities and a numerous unincorporated communities, a number of commonalities emerged from this group. Namely, these local leaders view the river as a shared resource that provides broad benefits to their communities. As well, they are more comfortable making decisions when they feel well informed, in particular because they struggle to balance the various needs that are presented locally. They especially value the river a source of drinking water, but they are aware that the river presents dangers. Finally, they express sympathies for both agricultural and recreational interest groups.

In other ways, they expressed a diversity of opinions, both within and across geographic segments. Diverging opinions are found when looking at comments concerning private and public rights, local economies, managing for the future, and problems associated with noxious weeds.

There are particular points of discussion that seem to carry great weight for these individuals as they work to fulfill official duties. Conversations often turn to philosophies about governing, the challenges of local citizenries, the best ways to connect with state and federal entities and concerns about flood plain maps and official evaluations of local dikes.

Finally, discussions with local civic leaders offer four implications for the future. First, there is a need to generate and share good information at the local level. Second, there is need to help local officials with the complexities of holistic management, especially new officials. Third, with limited resources and growing demands, it is obvious that not everyone will have everything they want. Finally, governance via rules and regulations will require multiple strategies and careful coordination across the various entities and agencies involved.

The following sections explain the commonalities, the diversities, the particular points of concern and some of the implications of their comments.

Common Concerns Among Local Civic Leaders

The following concerns are common among local civic leaders, regardless of where one meets the individual.

The River is a Resource for the Community as a Whole: Among local civic leaders there is an expressed commitment to the river as a shared resource, to which various groups have rights, and from which their communities prosper:

The Yellowstone was very influential with settlers being in the area initially. Some large cattle and sheep ranches [were established]. Then the railroad went from the western border to the eastern border of Montana. I would say the Yellowstone might be the single most important entity for establishing Glendive, and [it is still] the reason [Glendive] is here today. A lot of small communities have dried up and gone away. Glendive continues to be a lifeline in Eastern Montana because of the river. (*Dawson County Public Official*)

From our standpoint as commissioners, the [river provides] economic benefits for the local area....[It] provides irrigation for the farmers....It brings...the hunting and fishing people...[and it serves] our own recreational uses. (*Rosebud County Public Official*)

If you follow the valleys down, you'll find that throughout Eastern Montana...the vast majority of the economy is within the boundaries of that river....And it's not a whole lot of land....[And] the water that the City of Billings takes from the river,...there would be no growth potential if they couldn't do that. (*Yellowstone County Local Civic Leader*)

More than anything else, I think...we live in a society that creates a lot of pressure and tension. People work 24/7, almost just to try and make ends meet, and they need a way to get away. Right down here [at our park,...] all summer long, you will see people there come in just to get away and replenish the soul. I just feel as long as you set reasonable policies I think you can let people have access to even your smaller tributary areas that feed the Yellowstone. (*Stillwater County Local Civic Leader*)

As anywhere, [we have] a very complex stew of interests. I think the County Commission that has a lot of power that they are reluctant to use because [they are] balancing interests. I think you've got some fairly enlightened folks on the County Commission. I think that they're only now gaining enough confidence as a commission to take steps to protect the river. (*Park County Local Civic Leader*)

Good Information Helps: It is evident that local civic leaders consider good information important, both in making decisions and in helping others in their communities understand the decisions that are made:

Erosion is constant....The problem is, if [we address erosion] here, we're affecting everything downstream. They have learned that...small changes on this river cause major changes downstream....We have a bridge out here that [the river] flowed straight through the piers. It now flows [parallel] to the bridge. Minor changes have had major effects on that river....You can't control this river....One year, this guy lost 600 feet of agriculture land. (*Dawson County Public Official*)

We can always use examples of strategies that have proven to be successful in an area that is not that different from the area where we live. An example is the National Main Street Program....Miles City can look at a database of communities that have made these changes, and what the challenges were, and how they overcame those challenges. [The Yellowstone River Conservation District Council] could give us some models as to how we can manage the bottomland of the Yellowstone. How do we zone the area around the river so it is preserved for the kinds of activities that are most important to us, like Ag and recreation, [with] security against flooding, and [protection for] wildlife and fishery habitat?...[We need] some set of priorities that the [local community] can then start working on incrementally. (*Custer County Public Official*)

Once I explained... 'Hey this fishery is the best thing that could happen to you....You're downstream of the need to have 2000 CFS in the [Big Horn River] for the fishery. So, don't cuss at those trout, because that's the best thing you could have. Now you've got the fishery people on your side....They don't care that much whether you're taking the water as long as it gets past Two Leggings [drainage]—the end of the blue ribbon stretch is in there.' And once they figure that out, they liked that idea. (*Yellowstone County Local Civic Leader*)

I think the flood plain is...expansive along the Yellowstone....We've got maps that would show that, and it's all elevation relative to high water mark that occurs over so many years back. I think we probably depend heavily on the State for that information, so we would have maps. (*Stillwater County Local Civic Leader*)

Our old maps are terrible to use and the new maps, with elevations and overlays on aerial photos, are so wonderful to use. What little we have been able to use them has been very helpful....[The maps] have to be accepted by the commissioners, and then they go to DNRC,...then to FEMA, and then they have to review and put them on a rate map to drive the flood insurance. Some of the meetings that are scheduled for approval are [scheduled] for 2008....It has gotten political. They have talked about moving the flood plain and it is a big financial burden on those people. (*Park County Local Civic Leader*)

Local Needs are Various and Must be Balanced: Local leaders and officials are aware of the various needs of their communities' members. They also explain that, often not everyone will be fully accommodated and that they must attempt to balance a variety of local demands:

In our community, where everybody knows everybody, they know someone that has access somewhere. If they don't, there are public access sites. I have never heard of anybody complaining that they were denied access to the river. (*Dawson County Public Official*)

Rather than a flat 500-foot setback, there's usually an identifiable meander channel where the river wiggles back and forth over time. And that could be the no-build zone....[The no-build zone] would depend on the topography. We have some steep hills coming up to the river's edge, and there is no meander channel....[We could be] flexible...based on some criteria. (*Custer County Public Official*)

There is a critical balance....It would be ticklish....Those who are really sensitive to the water [rights] would have some immediate red flags....It is a critical balance that we have right now....It is a real touchy balance. (*Yellowstone County Local Civic Leader*)

Irrigation in this county is a huge deal. From the county's perspective, we are trying to construct facilities that are safe for the river, in terms of fish habitat, etc., but [also] trying to protect the agriculture users. They are a huge part of this community. Some people say they don't care about Ag, they care about the 'viability of the river.' Once you get past the base minimum standards, those are local decisions. I think a locality can choose to be more protective....I understand that can be messy, but I can't think of anything that isn't [messy] when you are doing grassroots planning. You can't exist in a vacuum and say that it has no effect on anyone else. You can't say that with the Yellowstone. You can't have this over-arching 'We know what is best for you.' (*Sweet Grass County Local Civic Leader*)

It takes some persuasion and education in terms of the public. The public is so used to thinking of the river as being something you need protection from and I think we need to understand that it is a dynamic resource, and we need to learn to live with that dynamism in a way that doesn't degrade the river in terms of fish productivity,...aesthetics,...natural functions...[or] seasonal changes. (*Park County Local Civic Leader*)

The River Provides Water But Can Threaten Health and Safety: Local civic leaders are especially aware of the importance of water for human health needs, but they also regard the river environs as areas that potentially pose risks to the safety of their local citizenry:

It's difficult to save people from themselves, so I think that one of the most important things a governmental entity has to do is persuade rather than demand. And I think that's where the involvement in the decision making process is critical....You have to be open and receptive to public comment—you have to be empathetic without necessarily having to agree. And I think in the instances when we don't agree, you have to convey [that you are] understanding without necessarily being in agreement....The Corps, in the past, has not been as sensitive as they might have been in terms of conveying to the public that they are listening, not necessarily agreeing....[With] set-backs, you're trying to save people from themselves—it's a very hard sell. (*Park County Local Civic Leader*)

We draw millions of gallons of water out of the river daily. It is our lifeline for the city....We are probably one of the only communities that take water directly out of the river, and we don't worry about getting sick. (*Dawson County Public Official*)

There's disagreement among hydrologists [about] whether that [1918 flood] was the 100-year flood or the 500-year flood. If it was the 100-year flood, we're due for it again. I have a picture of the [1918] owner in a boat on the front porch [of my house] so that really pretty much took care of everything in town. Everything was flooded. (*Rosebud County Local Civic Leader*)

[Billings takes] about 24 million gallons a day, peaking at over 50 million in the summer and down to about 15 to 16 million in the winter....We aren't even a pipsqueak compared to irrigators....We return 75 percent of it to the river [and] another 10 to 15 percent is returning to the aquifer. Ok, so we've evapotranspired 15 percent, but we've gained great things from that. (*Yellowstone County Local Civic Leader*)

The river is not safe [for human consumption] as it is. We remove all the fine particles, all the bacteria, and the viruses that are harmful....We improve its potability in the sense of its aesthetic quality to users. It's clear; it has a good quality taste....People find it pleasant....There's lots of water that's safe drinking water but not potable. The [Yellowstone River] is a good quality source. It's a bicarbonate water. We're pretty far up the watershed. There's only a minimal amount of interference from man, but enough that it wouldn't be safe for anybody to drink as it comes down the river. (*Yellowstone County Local Civic Leader*)

One of our obligations is to keep the roads and bridges open, and that would be for emergency services primarily but also for....school buses. (*Stillwater County Local Civic Leader*)

What shakes out first is public health and safety. I would say you are balancing those other factors. Beyond public health and safety, I wouldn't give a number to any of the others. I am not suggesting that if an irrigation project required rip-rap [that you shouldn't do it]....You look at the pros and cons in any kind of planning

[and] I think you are looking at a potential for impacts and how they can be mitigated, rather than a choice of either/or. It is a balancing act. (*Sweet Grass County Local Civic Leader*)

With respect to the river, I am not panicked about the river in the next ten years. I feel pretty good about where we are going with the Corps of Engineer's works and that they will come up with some measures that will prevent big floods. I have also lived around rivers enough to know that sometimes a river will just jump. Unless you have 14-foot flood retaining walls, there may come a time,...despite the best efforts,...[when the river] will jump. That is somewhat incumbent on living by a river. I certainly realize it is something that we may have to go through. (*Park County Local Civic Leader*)

Sympathies for Agriculture and Recreation: In general, even though many local officials view agriculture as economically important and a foundation of their communities, they also view recreational activities as important. They appear to have sympathies for both:

It is the 'too' country—too dry, too wet, too windy, too cold, too hot. It is always too much of something. We never have an average year. We have averages on the Internet that will tell you, 'Wow, that is a pretty nice average temperature,' but you will never see that temperature. I guess it is an extreme country. It has a lot of extremes. (*Prairie County Public Official*)

The river is very wide at this end because it's the end of the river. That's just what it is. I mean, it's over a mile wide down here...if you went all the way across. (*McKenzie County, ND Public Official*)

This is an agricultural valley. There are many crops grown here [like] grains, and sugar beets; sugar beets are a prominent crop. When you get away from the river valley, it goes to cattle....If there was not the river, we would not have irrigation; if there was not irrigation, we would not have sugar beets, spring wheat, winter wheat, [or] any of the crops that...[are] in abundance along the river valley. (*Treasure County Public Official*)

I know a lot of people who will go down and do recreation on the river. A lot of people fish on the river....It gives people an opportunity to get away from the everyday stress and just go sit at the river banks without having to drive a long distance. (*Richland County Public Official*)

The river helps make a nice community, with the trees and stuff. That is probably why I moved to Miles City. I was real hesitant to come until I got here and saw what they had to offer. I fished on it for a number of years. I know that, without the Yellowstone and the Tongue coming from the other direction, the recreation would be very sparse. (*Custer County Local Civic Leader*)

I know what the most important aspect[s] now...[are] agriculture [and] irrigation. But, I think the tourist attraction of [the river] as a natural, scenic resource will become more important over time....[Recreation] should have equal importance to agriculture. It is a tremendously diverse riparian ecosystem along the river. It has historical and cultural significance. It is beautiful. So, people will pay to come and use it, to see it, or they will consider lifestyle changes that involve the fact there is an undammed river nearby that they can appreciate and see. (*Yellowstone County Local Civic Leader*)

I don't think agriculture should have priority on the river. I think at best...[agriculture] should...be on par with recreation. Agriculture, you know, feels they have a right to the river, and no matter how hot the water gets, or how low it gets, they figure they got the right to what's left and to hell with the fish, to hell with everybody else, to hell with the whole living system around it. And I don't agree with that....You'll see it later this year, as the heat continues....It will stress everything along the river,...from deer to muskrats. (*Yellowstone County Local Civic Leader*)

[We] try to protect the people that have been here with their agriculture. You know, irrigation ditches. Things that have been there will be there. And [we] try to make sure that nothing infringes on that. (*Carbon County Local Civic Leader*)

I think even the people that live in Billings and [in] Yellowstone County to the east consider us their playground, which is fine. If I lived over there, I'd want to come over here, too. (*Stillwater County Local Civic Leader*)

When I was a kid, agriculture, and particularly livestock, was far and away what everybody was engaged in. They were all working farms and ranches. Recreation was interesting, but it was way down there [in terms of economic importance]. Now everybody that has any land out there has either sold it or is waiting to sell it. [There is] hardly any livestock....A lot of ranches exist in name, and maybe in area, but they are purchased by absentee owners or part-timers, and they don't have any interest in livestock. It has been a whole different slant on the vegetative and ecological part....The farm ground is worth so much...they can't afford to not sell. (*Park County Local Civic Leader*)

It is easy to describe because people have a picture of what Yellowstone Park is even if they have never been there. I describe it as an extension of Yellowstone [Park]. You attach things like the fishing culture, the hiking, the outdoor mountain recreation. I don't think anyone gets a sense until they have been there. (*Park County Local Civic Leader*)

Diversities of Opinions Among Local Civic Leaders

Among local civic leaders there are a number of topics that generate diverse opinions. These diversities can occur among immediate neighbors, but they can also appear as differences along the length of the river.

Valuing Private Property Rights and Public Rights: It is generally understood among local leaders and officials that they must deal with the tensions generated between private property rights and public rights. Each will express a commitment to not over-reaching on behalf of the public, but within and across geographic segments these individuals place varying emphases on private rights:

As far as a residential house, if the guy wants to build it there, ok, it's his land. Build it. But I don't think he should be allowed to say, 'I'm going to armor the riverbank'[And], like I said, nobody does that around here, because it floods. But, I know that further up the river that's done all the time, and [on the] lower river too. You go down below Bismarck, North Dakota [and] there are a lot of big homes built right on the river. And they're all rock and everything....It's beautiful. But let's say something happens, and it washes...[those] people away. Then, to me, too bad. I mean, that's the way we should look at it. (*McKenzie County, ND Public Official*)

The people that come off the ranch, and have had a great deal of latitude in terms of what they can do on the ranch...learn first-hand the statutes that control the city zoning and planning decisions....[Some of them] go ballistic or feel some real indignity....Part of the attitude is rooted in the economic scarcity [that] people who have lived here for generations [endured]....The good times come around so seldom and [people think] 'Let's make hay while the sun shines.' (*Custer County Public Official*)

You know, the Constitution of the United States, with its Bill of Rights, as well as the Montana Constitution, absolutely lists as an inalienable right your right to property, both personal and real. And you should be able to develop that to the highest and best use. The biggest problem that we get into then is the responsibility of the property owner....It was absolutely wrong for people to develop their copper at the expense of everybody else's environment. That was wrong. It is wrong today for somebody to build a house that is inappropriate and...destroys other people's values. So the balance between our right to own a piece of property, and to develop that piece of property as we see fit, either for our own aesthetic value or market value,...between all of those bundles of rights and the responsibility of a good citizen, as a neighbor...that's where, I guess, government and rules and regulations and so on come in....What is responsible in my opinion may differ from your opinion....Refereeing the property rights [is important, but,]...without a question, we're going to defend private property rights....People should be able to hone that property and invest and make money

in it, or sell it, or whatever. But there is a responsibility that goes with that ownership. (*Yellowstone County Local Civic Leader*)

Oh, yeah, sure we can [have management]. You know, private property rights are hard to...step on,...but there's sometimes when, maybe, you have to do something, or [you have to] mitigate,...or hope, or give them a carrot, or whatever. (*Carbon County Local Civic Leader*)

If you get flooded out and lose your home, why would you rebuild there? Because it only happens every 100 years? Can you get insurance? No. I do think that if you are going to take the risk, *you* should do it....As long as you handle your sewage properly, and you know that you can't get insurance, and the Feds aren't going to have to bail you out, if you want to do it and it isn't hurting anybody else, you can do it and take the risk. That is what our country is built on—...people that were risk takers....Your home is your castle. You should be able to do that. (*Stillwater County Local Civic Leader*)

Public safety has to be number one. Number two is probably...protection of property rights....I would put a high premium on property rights. (*Sweet Grass County Local Civic Leader*)

There's a culture of property rights and courts and so I think that the County Commission is certainly faced with a difficult balancing act in making decisions regarding things like set-backs. (*Park County Local Civic Leader*)

It's a real tussle sometimes between property rights and community values and who owns community resources. The river, like it or not, is fundamentally and primarily a community resource with very private sector edges, and that dynamic is not going to go away. The problems there and the conflicts are only going to intensify....I saw a really different dynamic when I worked in Colorado....They don't have the stream access law that we do....At least [in Montana]...there's a little bit more power held by the public than there would be in other places. The problem is how do you mobilize the public support for valuing the public aspects of this resource. I think there's not that realization that things could be different. And people have always lived within this environment in terms of river ownership, the public ownership of river rights, not understanding that it's not the common situation, it's very exceptional. (*Park County Local Civic Leader*)

Local Economies and the Future: Perhaps the greatest diversity of thought that is traced to the geographic segments is in terms of the local civic leaders' thoughts regarding the economic futures of their communities:

I think the main goal of this area would be [to] keep the river usage as it was, as we've been using it. I think it should remain for the agricultural part, you know, the irrigation part. I think the recreational part has been used for years and years, and I think it should remain that way. I don't want to see controls put on the river

by any government department....I don't want to see them trying to change the river...for something frivolous. I mean, if it was something that was going to destroy a water intake system, I think that's something that's legitimate....[It] should be protected, because it effects a lot of people, like in a city....Other than that, I hope people come and enjoy the river,...[that they] realize when it's private property to visit with the owners of the land, and try to be...good stewards.
(*McKenzie County, ND Public Official*)

I think that the energy thing is our biggest asset....The environmentalists and the...people [in power] need to get together and have a program where we have a safe removal of the coalbed methane. That is a big controversy, and they can't be bull-headed because it is a big asset to our community....Eastern Montana has ten percent of the coal reserve. And we have got to develop it, but we have to be environmentally friendly, within reason, and that is all I can ever see that really can help Glendive grow. (*Dawson County Public Official*)

People are becoming older [and there are] more retirees. I think this would be a fair statement. We've already seen [this happen in] the community of Hysham.
(*Treasure County Public Official*)

As a city council member [in Forsyth], one of my concerns is to encourage different businesses that would hold our kids, where they could go to [college] and come back and have something to work for. Right now, there's nothing.
(*Rosebud County Public Official*)

There's quite a bit of money spent by hunters in town here. You always see them in town at noon. They stay overnight at the motels, they stop in at the Friendly Corner, down here and buy stuff. Quite a bit of money gets spent here because of them. (*Treasure County Public Official*)

Priorities have been lopsided towards the environmentalists and communities have not been considered....I think [the] conservationists,...[who] are already doing things as far as the land [goes],...get penalized and shut out because it doesn't quite suit some environmentalists...[who] don't have a clue what it's like out here. (*Custer County Public Official*)

A lot of people from this area see the river as a recreational resource....Sometimes that can take precedence over a real good logical use of the river. (*Custer County Public Official*)

Those who are interested in the future of this urban area should be interested in the calling cards to the area, one of which is the river. If you allow a few to own it, you've lost that calling card. Would it suffice for the ecosystem if it were a park? Absolutely it would, because it's a huge area. Riverfront Park is a pretty good example. It needs a lot more extensions. You can go to many cities, Boise is a good example...and fair amounts of Missoula's Clark Fork are in public

ownership....Their urban area is right on top of it....The Yellowstone is a beautiful possibility for an open wildlife corridor. (*Yellowstone County Local Civic Leader*)

I think we're going to see a lot of change because we have endless amounts of subdivisions going in. That brings a lot of problems with it. And they're wonderful people. We have doctors, and veterinarians, and all kinds of people living out in the hills here. They just want to be left alone, but they're going to get terribly bored after a couple of years. And we just wait for that, so we can put them to work as a volunteer. They're really wonderful people. (*Stillwater County Local Civic Leader*)

It's very special to have this river here, and, of course, we want to protect it. We want to make sure that any housing developments follow the DEQ rules, [especially] septic should be placed according to DEQ. I guess I don't believe in setbacks. I think the property owners have the right to be as close to the river as they want, without damaging the river. If they do not damage the river, I think it's their property line. (*Stillwater County Local Civic Leader*)

People come out to Montana and they are enthralled by the views and the attitudes of the people and...they settle in here and they want to have it all, but by some of their actions they are responsible for destroying the things that they admire....They want their big castle back in the trees, or up on a ridge, or right next to the river. They have destroyed what made it beautiful....The wide open spaces aren't wide open anymore. (*Park County Local Civic Leader*)

It's changing....There...[are] a lot more houses than there used to be....It is just a reflection of the whole transition from an agricultural based economy...to a tourist and recreation area. (*Park County Local Civic Leader*)

We have CEOs from big companies...that fly in with their jets and helicopters. They will spend a day, or a few days, and then they are out of here. The rest of the year, we are taking care of it. We worry about weeds and roads...[while] they have one little ranch manager whose authority is limited to keeping people out....We don't want to be a rich man's Disneyland. They come, they go....We are trying to maintain something and still be progressive. (*Park County Local Civic Leader*)

The land prices are high, at least agricultural lands. It's being influenced by recreational ranch buyers. (*Park County Local Civic Leader*)

Managing for the Future: Local civic leaders are fairly consistent in arguing that local control is better than Federal, or even State, control. Yet, the call for local control is generally outmatched by comments that acknowledge Federal and State standards as the primary means for protecting communities from unnecessary expenses and for protecting the future of the river's resources. A great deal of emphasis is placed on the need to

accept the river as a dynamic and changing entity that requires respect if one intends to manage for the future. Comments suggest that at least some officials attempt to anticipate problems before they are unmanageable and that they attempt to work with groups to help them understand future implications of personal actions:

There are already rules by FEMA that say you have to buy flood plain insurance, which means you have to abide by their rules. Enforcement of [the rules] is something important that you have to do. Pierre, South Dakota is a great example in that they let a subdivision build in a flood plain, [and later it] cost...millions of dollars to buy out 300 homes. In Billings, they just kicked some people off the flood plain. It is for the saving of dollars and lives. (*Dawson County Public Official*)

Anybody that lives along the river has to have problems with bank erosion. Five years ago, there used to be one of the best cornfields in the whole area, upstream about five miles....[Then the] river took one of its classic loops way off to the other side,...[and] it went right through the middle of that cornfield. It took out 40 acres of that field and abandoned 120 acres where it had run before. And [now] if you look at that abandoned section, occasionally in high water [the river] will move through there, but there are young trees in there, and there's shrubs and bushes....So, as the river moves, it both creates and destroys, as it has always done....I happen to be a fan of wild rivers. I hate to see people lose their homes, and I have a certain amount of sympathy for a home that has been standing for 100 years,...but the river changes....I think a person should be able to protect their property, but I am absolutely opposed to new construction in the flood plain. That's an accident waiting to happen....That is eminently foolish. (*Rosebud County Public Official*)

What's the cumulative effect [of development] on the underground aquifers?...I don't think it is as big an impact as people are trying to make it to be....I think we have plenty of water. It snows like heck every time, and we [have] water coming down the Yellowstone....And if you read in Genesis, God set the whole thing up to where the river comes down, [and] evaporates, and the salt sea is almost a purifier....Now, that's a pretty good ventilation system that He developed. And that's here in Montana. Now we are running through some droughts, and you can get into global warming....But what I see in Montana is, we've got lots of water. We are not going to run out of water unless there is this global shift that changes things. (*Yellowstone County Local Civic Leader*)

People will tell you they need the access, but that's usually too late because they realize that their access is being blocked. I think [it helps] bringing in somebody that has some experience in another place...[and make judgments] based on maybe projected population...and characteristics of the river....You might need some outside help. (*Yellowstone County Local Civic Leader*)

Keep the Feds out of it. It should be done on a local basis. The people that have the most clout in the county are the county commissioners. They are local people. For the most part, they know what has happened. They are accessible. They are common sense individuals. They should really have the final say on it. Community planners...[are] part of it....[It's] like designing a sewer system. You could get a local guy [to] do it for \$100,000. No, you have to get engineers and all the other stuff, and pretty soon, it is two million. (*Stillwater County Local Civic Leader*)

It is meander-land, and nobody can own that....There were river changes in that '98 flood, and, of course, some islands were created, and it washed down banks....Some people lost acres and acres of land....I know of one group who ended up with an island, and they claim it's theirs, because the river ran right through their property and created an island....Nobody pays taxes on it....For example, if this is a lake, and the water comes up in high water years to cover most of [the land], you wouldn't think that would reduce your taxes, [and] it doesn't. Or, if it goes down, and you can farm this for a while, you still don't pay taxes on it. But, you can't claim it either;...its no-man's land....[It] used to be that the Corps of Engineers could come in and just change things at will, and that caused its own set of problems, here and there. I don't like the idea of changing the direction of the river....It has its own set of problems that come with it. It might help this guy who lost some acreage to reroute the water away, but it ultimately, someplace else, will cause a problem....I think rivers should meander wherever they naturally go. (*Sweet Grass County Local Civic Leader*)

I think that preserving the agricultural aspect of the community is really important and a lot of it can be done through education. I don't think it is a win-lose situation....I think, for the most part, ranchers are pretty responsible. I think that they can do things better, but that is more of an educational process than intent to harm the resource. (*Sweet Grass County Local Civic Leader*)

I think the city will continue to struggle with subdivisions, whether they should or shouldn't be allowed. We only have one zoning district outside of the city limits and it is voluntary. We are going to put our land into a zoning district and in this district you can't carve off less than 160 acres. By voluntary, I mean when they created that district that carved out anyone that didn't want to be part. County or city can come in and say we are going to zone. Outside of the city limits, Sweet Grass County is un-zoned except for that one area. I think in ten years there may be more zoning, either private, although there has been more discussion if there would be interest in county zoning for a certain distance. I am not advocating or suggesting it is a bad or good idea. I am just saying that these are being discussed. I don't know that I know what I think of it yet. (*Sweet Grass County Local Civic Leader*)

The most important thing is to be proactive and not assume that problems will solve themselves. The only thing that happens with that passage of time is the two

sides of the issues become more concrete in their positions and less willing to look at the common elements of interest. So, if I were to talk to someone in a county that's maybe 20 years behind where we are in terms of growth,...[I'd say] start from the perspective of trying to determine what values are generally held in common by the whole community. Work with those commonalities and keep the focus on the commonalities....It won't [necessarily] prevent the polarization, but it will certainly keep people focused on avenues to solutions that recognize commonalities. (*Park County Local Civic Leader*)

Help is Needed with Noxious Weeds: Almost without exception local leaders note noxious weeds and invasive plants as problems near the river. However, there are great differences of opinion regarding whether or not the current efforts to control these plants are effective and regarding who is responsible for the problem:

The noxious weed program [is] absolutely [important]. We have a multi-county [effort] working on the salt cedar...and leafy spurge. We actually have some spotted knapweed on the river, particularly on the north side of it, now, that is of great concern to us. (*Prairie County Public Official*)

Salt cedar—that's a big issue, and a pile of money gets spent on it. There's some knapweed, but, you know,...they were brought it in for honey bees. I was just reading about it the other day. They brought it in up around Idaho and it took a long time to get started, but once it got growing...[it didn't stop]. (*Treasure County Public Official*)

The only other issue that's the big one is the noxious weeds....There's just about every horrible weed you can find on the Yellowstone....I don't know how it got started, but it definitely goes down the river. If you just go on the riverbanks and look, that salt cedar is just about everywhere now. We can't hardly go anywhere without seeing leafy spurge and...it's a very competitive plant. It'll take a field over....You can't just kill...knapweed and spurge....I can only imagine if we don't get a handle on that how that will look in ten years....Salt cedar is an issue we used to only talk about around Sidney. Now...it's all over the Big Horn. (*Yellowstone County Local Civic Leader*)

Small tract owners....We have people who bought their 40 acres and don't have a clue what to do with it because they've lived in town all their life. So, what do we end up with? A whole bunch of weeds. Don't allow anybody on it, 'This is mine. Let's not graze it, let's not do anything with it so the fireman will have something to look after.' That's really real out here. They don't allow any grazing or anything to use that tall grass that's out there, waiting to burn. That's hard for me. We need to harvest things if we expect them to grow. I've watched an awful lot of pastures [and,] when they're managed right, you get good strands of grass and a good ecosystem. And if you don't manage it, you've got a mess. And we have subdivisions that are a mess, although we've had a really active weed department, and they finally realized that there are other ways of controlling these weeds,

biological, do little with livestock, spray the perimeters so we don't spread it over the neighbors. If somebody is highly allergic, or their value system says I don't want anything to do with pesticides, far be it for us to suggest to use it. Let's give them a few bugs and they're tickled to death. We've got a real diversified sort of a weed management system, or we don't call it weed management; it's plant management. (*Stillwater County Local Civic Leader*)

The Governor has proposed spending a sack load of money on new public access. What is typically not in those acquisition dollars is maintenance dollars. And Fish, Wildlife and Parks has always been short of maintenance dollars. It's easy for them to get Federal money or grant money to buy land, but they don't take care of the weeds, they don't take care of the trees, they don't take care of the whole ecosystem, if you want to talk about that....I continually say that the tree-huggers, or whatever you want to call them, don't give enough credit to private landowners...They'd like to see the whole valley owned by the government, but the government can't take care of what they've got. (*Park County Local Civic Leader*)

Specific Concerns Among Local Civic Leaders

The concerns identified here are, more or less, specific to this interest group. In most cases, the issues are linked directly to the role of local leader.

Philosophies about Government: Not surprisingly, local leaders engage in thoughtful discussions concerning the role of governing agencies in managing river resources. While the specifics of “good government” can vary quite a lot, it is obvious that many local leaders believe that rules and regulations are necessary and that “good government” is possible. Their efforts are varied and earnest. The most obvious distinction is geographic—the communities in the eastern-most reaches of the river are much less convinced that rules and regulations are necessary, whereas those in the western-most reaches are almost unanimously convinced:

I've had a lot of people say, 'We'd better have some rules and regulations along this river....Aren't you afraid that people are going to start building right on the river bank?' Well, no. That river itself will take care of that problem. I've lived here all my life, and ice chunks and water will destroy a house very fast....You'd have to construct a sort of levy around your house because it just floods every so often. (*McKenzie County, ND Public Official*)

The next [Miles City] Mayor's Task Force is a quality-of-life task force. [The group will consider how we] can provide amenities that leverage some of our best natural assets. The trees are something that we have an abundance of, [and] we are looking at becoming a 'Tree City.' We have these rivers and the levee....These could be scenic walking, biking and horse paths. [Right now] we have ATVs and four-wheel vehicles that are ripping around....It will be an uphill battle to ask, 'Why are you abusing this resource?' If we don't do it ourselves

then I fully expect other people to come in and say, ‘We built this dike and the activity is going to stop.’ The city council and the mayor’s office have been dominated by people that have grown up here and have a maverick spirit...[but,] if we are going to ever be attractive to people from out-of-town, we need to start treating those resources with a little more respect. (*Custer County Public Official*)

Bad policy...makes people angry. And the one thing that we found out is that you don’t force things down people’s throats. You sit and work with them and you work on a solution to get it done. That is what creates the balance....We sit down and work it out....This is really a feather in Commissioner Reno’s cap. We are going to actually have a grand opening...for a boat ramp access to a big island down on Pompey’s Pillar. And that has been a site where there have been [both] trespassers and legal access to the river off a county right-of-way for the last 150 years. It is a great spot [for access]. (*Yellowstone County Local Civic Leader*)

[When] you have people who are talking emotionally, [you can] get caught up in the emotion, rather than the facts. That’s why it’s important that you have people who can present the facts....Make the decision that’s for the betterment of the community. A lot of times, if you get caught up in the emotional decisions,...you walk away and say, ‘What did I just do?’ (*Yellowstone County Local Civic Leader*)

I want people to get along so that, in the end, we have a free-flowing Yellowstone River that behaves itself—if that’s possible. But I really believe in people respecting others’ thoughts, and not doing things just because the law is on their side, or [because] they can [afford] a lawyer. They can threaten people and get away with it....There isn’t a problem that can’t be solved if we work on it and reach a little consensus, but some people are so ticked-off that they won’t come to the table. They know that they won’t be treated properly....There’s enough of these high rolling dudes in the country that they intimidate folks....Meanwhile, the river runs. I’m going to start a new soap opera series and call it *As the Still Water Ripples*. I tell you, we could keep that thing running for years. (*Stillwater County Local Civic Leader*)

Oh, yeah, sure we can [have management]. You know, private property rights are hard to...step on,...but there’s sometimes when, maybe, you have to do something, or [you have to] mitigate,...or hope, or give them a carrot, or whatever. (*Carbon County Local Civic Leader*)

You do the best you can. People have the right to live where they want to live. I think there is a growing awareness that [rules sometimes] change. It is tough to deal with, but just making the people...more aware of the problems that we all face, and having them taking some responsibility...[will] help make that change positive instead of negative. (*Park County Local Civic Leader*)

[We might want to assume] people are rational actors, that they process things and they act in rational ways. Well, they don't always. A lot of times people will act in ways that are not only not maximizing their profit, but...they act contrary to those ways because...[their] biases and heuristics and rules of thumb...systematically, and very predictably, distort their perception....[For instance,] someone buys property right on the river for the accessibility of fishing....Then he puts a bunch of rip-rap down there to save his property....[The rip-rap] is damaging the resource in very predictable ways and diminishing his property values....[If] he'd built back, say 150 feet, [he would have] maintained the productivity of the river along that reach. So I think that's the heuristic that's based on ignorance of how the resource works, how the system works. So, to that extent, education is helpful, but you also need persuasion in terms of the credibility of the argument. (*Park County Local Civic Leader*)

The Challenges of Local Citizenries: Local civic officials discuss a wide variety of experiences in dealing with their neighbors. Sharing is apparently much more difficult when the limits of the resources are within sight. Comments regarding interactions with the local citizenry reveal that the communities of the upper reaches of the river find the task of sharing a contentious process:

In our community, where everybody knows everybody, they know someone that has access somewhere. If they don't, there are public access sites. I have never heard of anybody complaining that they were denied access to the river. (*Dawson County Local Civic Leader*)

Landowners are getting extremely reluctant to allow people from the federal government to come in and inventory anything on their places....Landowners do not want more intervention on how they manage their property. As we move forward, we need to make sure that the inventory isn't used as a starting point for a change in management practices along the river. It is fine to suggest [new ways] and to tell people why it is important to do those things, but in my opinion it is not appropriate to force them to do these things....Our role is to help people understand the changes, not to dictate that they will change. I think it is appropriate to have control of things...[but] these federal mandates tend to get scary because, at the federal level, they are very gifted at the one-size-fits-all style of regulation. (*Custer County Public Official*)

People have to realize that there are two sides to every story, maybe one good, one bad, but there's two sides. I learned a long time ago when I was working that I had to listen to both sides, and then maybe my side really wasn't right, but maybe the other person was right. And so you learn that...you're always going to have pessimists in whatever you do, but I think...people [need to] understand what you're trying to do...[and] keep them involved. Don't do it behind their back, because you'll lose everything. (*Yellowstone County Local Civic Leader*)

The good old Yellowstone is a cantankerous old thing. That river is wonderful, but it's also wonderful to watch it. It's going to go wherever it wants to go. I'm kind of torn...because we have people [who] defy us to do any rip-rapping, or to save a public structure, or anything like that. We're not supposed to do that, I guess. That's what I'm hearing. But, darn it, you've got a two million dollar bridge sitting there, and the thing's washing out, you better do something. We can't shut all the traffic off....This bridge down here was in jeopardy. So, they brought in a lot of rock and fixed it. It's fine. We had it protected....We've [also] had some subdividers that have gone on their own and put in some Mickey Mouse things, jetties. But it really didn't upset the river a whole lot; it's got a mind of its own. (*Stillwater County Local Civic Leader*)

Montana is interesting to me in that it goes beyond public information and public comment to public decision-making. Folks don't just expect to know what is going on or have access, or be able to make comments, they expect to be seated at the table with the ability to put their hand in the air and cast a vote. I appreciate the interest that people have. It can present challenges if a lot of people feel like there has to be a consensus before a decision can be made. That can be difficult. (*Park County Local Civic Leader*)

Some of these people don't take no for an answer. Now, developers come and bring a staff of lawyers, hydrologists, engineers....They will come to the planning board meetings with their attorneys. They will set up their own sound systems so they can record everything. This is a kind of intimidation where they will sue you if you don't do something they want, 'We are recording every word that you are saying.' They have a whole entourage of people working for them, and you are one person, trying to do the best for the county, and you have to face their staff. That is how they are now....They will hire their own stenographers for meetings. They will go to the commissioners meetings when it is their turn to decide something. They intimidate....First, they will try and schmooze you. They will put on a luncheon. If that doesn't work, they will get tighter and angry. Then come the lawyers. (*Park County Local Civic Leader*)

To some extent,...irreconcilable situations occur when ideologies start from a position...and therefore [the person] only admits the evidence that applies to that position. I think that's the danger. (*Park County Local Civic Leader*)

Connecting Local Government with State and Federal Entities: Ideas about how the local entities should work with State and Federal entities are numerous, but it is clear that local leaders want to be engaged and they desire greater coordination of efforts:

How the flood plain[s] themselves are delineated is just based on seat-of-the-pants [guesswork], basically....As you travel the interstate, you can see people are within 50 feet of the bank of the Yellowstone. They can't get close enough if it was up to them. Yeah, I do have a problem with that....From the planning board perspective,...in general, I guess I agree with setbacks....[But,] just case by case.

Someone has to make that judgment [as] part of generalizing to a rule,...[but] the river...varies every quarter [of a] mile....No one could agree on how to word [the rule]. (*Richland County Public Official*)

Our other problem is that they are understaffed. With this economy, enforcement [of regulations] is not an option....In order to do the enforcement you have to have the tools. It has to work from the top down. You have to have a county attorney that is willing to prosecute. (*Dawson County Public Official*)

I think we like to be left alone....Don't come in and try to take it away from us. I have heard some stories from up at Billings where they come in and actually run farmers off the riverbank....The regulations said he could not be on the riverbank even though it was his private land. He could not dump his rocks down there because he was messing up the river. (*Prairie County Public Official*)

You don't want the troublesome fight....For example, [when] the Hysham water ditch system [needed to have some work done],...they had a tough time getting permission for that. (*Treasure County Public Official*)

Right now, my major concern is the infrastructure. Like so many entities across this country, and in this state, the infrastructure, as far as the delivery of water, is very old....The lines were [last] repaired in the '40s or the '50s, or even early '60s....Forsyth has no industrial base, so the availability of funds is always a burden on the individual taxpayer, that means small business people and homeowners in this community....State statute mandates that the water system is self-supporting. So, you can't pay for it out of a gift,...[or] from the general fund. It has to create its own revenues. That didn't seem so bad when that statute was first put in place in the early '50s. But, with the rising cost of this and that, how is it going to support itself [except by] a continual rise in water rates and sewer rates? That really frosts me. It just does. I think government has certain responsibilities, and to me that would be one: provide basic services to the public. (*Rosebud County Public Official*)

The question is, should there be coordination? And who's responsible for doing that? You can have a Federal program, you can have a State program, you can do all that, [but] those only work if people want them to work. It has to come from the people. You cannot mandate that stuff....If this report ends up saying that there are a lot of issues and that there is no consensus, well, we already know that....There needs to be time to process and think about something and not make snap decisions. (*Rosebud County Public Official*)

Now, we are very fortunate in Montana that those major rivers supply a tremendous amount of water....The State of Montana...owns the water. And the thing that bothers me most...is the Federal government and the Corps of Engineers and their control over our water. They [can] demand

water...downstream...[to] float barges in the Mississippi....That is always bothersome to us. (*Yellowstone County Local Civic Leader*)

You have the Fish, Wildlife and Parks with the mission of access....Then you have...the road department that tells the private owner that, if you give me a right-a-way, we will fence it and keep the public off your property....Down by Duck Creek...you have a river,...a private property owner and...you have a bridge. [The area by the river] is all within the high water mark so [the public] can [be] down there...[but] to get down there, people do what? They drive down,...violating this guy's right....because the State said, 'If you give me my road right-a-way through here, I'll fence it.' So [the State ran the] fence...up to the bridge [and] the public can't get from this public right-a-way to this public right-a-way without climbing over the fence. [So] they cut the fence....There are solutions:...pedestrian gates through there, and better enforcement by Fish, Wildlife and Parks. They often will open an area up but they count on the Sheriff's Department or somebody else to put out the bonfires and the keggars....[This] is a State issue....They sign those agreements for 'highway uses only'....Quite honestly,...you need to provide adequate access where you can because [the river] is a public resource. (*Yellowstone County Local Civic Leader*)

I would like to see nice fishing...accesses developed that Montana Fish, Wildlife and Parks might have to spend some money to preserve the appreciation of the river. And good parking....They need to step up and get some good spots, and they're going to have to pay for them. (*Stillwater County Local Civic Leader*)

[Our former] planner....noticed the local people don't like the local people telling them what the regulations are, but if it comes from the state or the federal government they are fine with that. They don't want a local official bossing them. They feel [the local official] could be more biased than a state or federal agency....We get it constantly....If I can say, 'I have to administer [this way]...it's from FEMA and I don't have a choice'...then they say, 'Oh, okay.' (*Park County Local Civic Leader*)

The state and federal government input needs to be sensitive to the local commercial economic needs...[and] the concerns of residents, especially on the east side of town that are currently at risk of either flood damage or having to leave their homes. And one of the options in that 205 study is a buy-out....I think that those kind of options certainly need to be discussed in a way the community is comfortable with....We've seen cases in which there were decisions made at the federal and state level that appears to be made at the city level. The city government takes a lot of heat for things that have actually occurred in a different level of decision making....I think it needs to be a process by which there's not just a public meeting, it needs to be a neighborhood by neighborhood communication [process]....Convey [information about the risks] in a way that's understandable and a way that allows participation...both directions, from the residents to the governmental agency, and vice versa. I think that all too often the

government agency does the research and makes a decision on their own, and then conveys their decision to the public. There doesn't seem to be a lot of opportunity for public participation in terms of understanding. (*Park County Local Civic Leader*)

Flood Plains and Official Designations: It is a common call among local leaders that flood plain maps are essential to their communities and to the economies of local families and businesses. Some express concerns over timeliness and credibility of the available maps, but all seem committed to using “good maps.” Similar sentiments are expressed when discussing official determinations regarding the dikes that protect their towns. As a group, they desire maps and evaluations in which they can place their confidences. Those from communities considering setback requirements acknowledge the difficulties in developing local support for such changes:

When the Corps built the flood dike, they built it to the current standards, and it is not [now] acceptable as a 100-year flood dike....To raise the dike it would be ten or 12 million dollars....To buy out the property, and demolish everything, and return everything back to the Yellowstone Basin, would be 18 million. You are talking to a community that doesn't have the money. (*Dawson County Public Official*)

We have been working on [flood plans], off and on, for 12 years....It got pretty hectic because that one time we had a lot of rain, and we had a flood situation, and they wanted insurance. You can't buy flood insurance in this town until we have it tied up with [a] flood plan. And we started working on it....The only thing is, if you are in the flood plain, you have [to meet] certain specifications...in order to get flood insurance. I cannot buy flood insurance for my house,...but anybody can buy insurance...if you have a flood plain plan. Nobody can buy insurance if you don't. But...you can enforce specifications on people if they do build in the flood plain. And some of them are pretty...[strict]—where it is not very feasible to build in the flood plain. (*Prairie County Public Official*)

I believe the dike is stable. I haven't heard a lot of negative on it....It does cause a lot of people to pay high insurance. There is a moratorium, or restrictions, on building in some areas. A pretty big chunk of town is affected by that—everything north of the railroad tracks. (*Custer County Public Official*)

I have an idea: if we ever have a real wet winter, all...[of a] sudden we will find the weaknesses in [the levee,...] [and that] will become an issue. But we haven't had enough runoff or water to say it's been a problem. There was a period of three or four years when there was quite a bit of ice buildup and ice jams....My husband was working out at the packing plant at the time and one night he really got scared. He heard the ice breaking up and there was ice coming on shore....If there is one of those winters where there is a deep snow pack and then we have a lot of snow—the two combined—then it could be interesting. (*Custer County Public Official*)

Do you want me to come in and tell you what you can do with your 160 acres? And what if that is where you put all our resources...and your plan ultimately was to...pay for your retirement? Then along comes the government and says now we are going to make this a riparian area. This is a green space and you can't develop that. I have just wiped out your assets. The government has to be careful that controls don't go overboard...[and] start infringing on private development rights. (*Yellowstone County Local Civic Leader*)

Flood plains are sacred. We just cannot break in flood plains like we used to. There are some things...[that the] law requires: you have to have a three-foot differential, the land where you're going to build your house has to be at least three feet above where the water table is. Well, if that's based on a dry year, and you build your house and then you have average years again, or normal years, you might have a problem. The law doesn't account for that. (*Stillwater County Local Civic Leader*)

It is hard to change regulations. That is a hard thing to do. We talk about rewriting the regulations, but that is a scary thing. People go ballistic. Not because of logical reasoning, it is because they don't want anymore regulations from the government. It ends up in the same kind of fight. (*Park County Local Civic Leader*)

Implications of Local Civic Leaders' Perspectives

Taken as a group, the perspectives and concerns voiced by local civic leaders suggest that very particular issues must be accounted for, both in the near future and in on-going resource management strategies.

There is a Need to Generate and Share Good Information: It is noted above that local leaders desire information that is locally credible, and they express a desire to have information from other places evaluated and presented in ways that are useful to their specific context:

A couple of weeks ago we were looking at maps on this growth plan. They have these GIS maps, and they are not even...close, especially around Glendive. It doesn't even show what it is [already in Glendive]. (*Dawson County Public Official*)

You look at the flood issues in other states, and...[how they allow] development right up to the water[']s edge—is there something to be learned? Should we protect the riparian area? Should we be considering a setback as a tool?...The Red River Valley in North Dakota floods frequently and they go right back in and build again....I hate having...[regulations], but you have to. If each county is different, how is that managing the overall river? I see a broader scope of application, either through the council [the Yellowstone River Conservation

District Council] or state law, that would allow us [control and still] not get backed into the one-size-fits-all type of regulations. (*Custer County Public Official*)

Analyze the information you have from everyone...and identify the best ones—best practices. That is how you come up with one...[But be honest during the process]....You have everybody, and they are nodding their heads, and then someone says, ‘No, you can’t do that. It is against this blah, blah, blah.’ Well, you just shot that [idea] down and you just wasted three hours! Lay your cards on the table and be honest about it, for God’s sake. (*Yellowstone County Local Civic Leader*)

We should be able to develop [information] that would serve all of our counties....To say, here’s some of the pros...[and] here’s some of the bad ideas we came up with....To make sure every county follows the same sets of rules that we make for everybody. And sometimes maybe one set of rules don’t fit everybody, but education would work....If you could think ahead....Education is the biggest thing when trying to educate people to...think out of the box. (*Yellowstone County Local Civic Leader*)

The increase in population pressure never stops....We need to find a way to protect the river assets because there is getting to be more and more and more of us. And we all want a piece of the river for our own private purposes and...you can’t do that. I think we need to do some planning on the river before you destroy what you love....By taking a look and starting to appreciate...what a tremendous resource the river is....You have to look at use options and priority settings and water rights. And I think you have to work together with agriculture, recreation and industry. I don’t like to see the either/or options being thrown around. No one ever benefits by that. I guess that is what I mean about planning. (*Yellowstone County Local Civic Leader*)

I would like to see a lot better mapping on the Yellowstone River. Most of our maps are 1982 FEMA maps. Some of the Yellowstone has had some updating, and...that is helpful, but there needs to be some better mapping and better understanding of activities in the flood plain, and how to best undertake those, both from a safety issue and also trying to protect the resource. (*Sweet Grass County Local Civic Leader*)

Sometimes the information that comes from public agencies, governmental agencies, is suspect. At least that’s the perception. And I think that there is also a perception that the best practices benefit the public at large, but they may not benefit me personally from an economic standpoint. And I think that’s where the persuasion comes in, demonstrating how those incentives really work on a personal level....People know what they know, and how do you get through that. (*Park County Local Civic Leader*)

I would like to see some better science on the effects of hard armoring and rip-rap on the...fish production...[and] habitat areas [such as those created in] flood stage....We've lost a lot of that. (*Park County Local Civic Leader*)

There is a Need to Help Local Officials with Complexities: Local leaders, especially elected local officials, are often thrown into situations that are quite complex. The first few years in office can be stressful and some are not shy about asking for help. They admit to running on instinct and common wisdoms, but they often make an explicit appeal for help:

My gut tells me,...if they look at the entire river, they get a better feel for what [upstream] changes can do [downstream]. I have heard stories about how, all of the sudden, the channel changes, taking away a bank upstream, and, all of the sudden a farmer has lost 100-feet of his field. I have also heard stories about someone rip-rapping their bank, and pretty soon, you have another adverse effect downstream. The natural course of the river has been altered. (*Dawson County Public Official*)

By the time you realize that [the community is changing], then you've got a mess on your hands, and that's really too late. The agriculture guys don't want land-use planning, and they don't want to be told they can't farm the flood plain because that's the best ground, that's their easiest access to water. And for years the irrigation method of choice was flood irrigation, which is the most wasteful, but it is the least expensive. It's far easier to take the water out of the ditch and run it through the...pipe and send it down the rows, than it would be to buy pivots. (*Rosebud County Public Official*)

What is lacking for me in my job is [information about] the state-of-the-art. What is going on in Delaware or Kansas? What is going on in Gallatin County relative to these issues?...If only somebody will bring to me the current trends. I was amazed when Gallatin County...put in a mechanism where voters voted to tax themselves to buy view sheds. [They didn't] want lights on top of Bozeman Mountain so, rather than zone it, [they] are going to buy it. When that was explained, it made me wish I knew some of the current best practices. (*Yellowstone County Local Civic Leader*)

There needs to be better mapping and more compilation of the flood plain. With the flooding of '96 and '97, there is more information that wasn't there in 1982. More of a site-specific analysis....From the planning perspective,...[we need] a better understanding of the hydrology, ecology, the geomorphology,...the safety features, irrigation facilities, bridges and abutments, a better understanding of the river and how the river changes, and the kind of things you need to anticipate. (*Sweet Grass County Local Civic Leader*)

I think that [the Yellowstone River Conservation District Council] has a lot of opportunity. The thing that they have to avoid is looking like they're a

gorilla....[Avoid] breeding defensive reactions....Work at a community level and genuinely engaged people. It sounds like such a simple thing, but it's all too rare that an agency genuinely appears to show concern for folks....Encourage people to define goals and force some rationality that wouldn't otherwise be there....Offer guidance in terms of what works mechanically and what works within the framework of the river as a river. (*Park County Local Civic Leader*)

With Limited Resources Everybody Will Not Get Everything They Want: It is both implied and explicit that the resources of the river are limited, while demands are growing. More local officials have a clear notion that decisions about sharing the resources will only become more difficult:

When you have good flow on the rivers, you do not have any problems with who gets to use the water because there is lots of water. Then, all of a sudden, when it gets a little short, the fish need water, and the wildlife need water, and the people need water, and the farmers need water, and there is not enough to go around. In most cases, and I tend to think more and more all the time, agriculture is going to be on the short end of the stick....Oh, yes, we see that up west already...because there is less and less political clout...[as] we have...[fewer and fewer] people in agriculture. That is just the way it goes. (*Prairie County Public Official*)

Those land-use planning...ordinances, or flood plain ordinances, or DEQ, or whatever the ordinance may be, people forget that it's not just because somebody wants to keep you out of some place. And it's not a situation of, 'Well, I've got lots of money, so if my house is washed away, it's my loss and don't worry about it.' It doesn't have anything to do with that. It has to do with loss of life....And, if that gets washed downstream, it messes everything up, and scatters all that material in the river where it doesn't need to go. (*Rosebud County Public Official*)

Water rights are very important....One of our subdivisions has junior water rights....[and a few years ago, during] the second year of the drought,...Fish, Wildlife and Parks...said, 'You no longer can pull water out of the Yellowstone River...because you guys have junior water rights'....We asked, 'Where we were going to get water [for the subdivision]?' and they said, 'The City of Billings.' Where is the City of Billings getting it? The same river. But, the City of Billings had senior water rights. (*Yellowstone County Local Civic Leader*)

Because of the in-stream needs of the fishery, and because of the way that the water laws are set up to reserve water rights, before the Big Horn comes in, in order to develop new irrigation systems, you've got to have a water right and that water is going to be junior to the needs of the fishery. Once you get past the Big Horn, and it reverses, then you can develop senior to the fisheries. (*Yellowstone County Local Civic Leader*)

We'll grow at a rate of two or three percent a year. Maybe a little bit more because some of that becomes geometric after a time....[The growth will affect

the river] indirectly only....As [our] infrastructure improves, and things grow, this county will just have more visitors, more tourists, and more people from surrounding areas coming to visit and play on the river. (*Stillwater County Local Civic Leader*)

To some degree, the Corps has been maybe too quick to grant the permits for hard armoring without...necessarily educating land owners that there are alternatives. And I'd like to see that. There are certainly a lot of soft armoring techniques that are quite feasible and, in the long run, have lower maintenance [costs]. I think a lot of landowners, if they were aware of those options, might choose those [soft] options....I think we need to look at alternatives. (*Park County Local Civic Leader*)

It isn't that we have to change it or protect it to death. We need to maintain it and respect it. I hate to say it, but the usage is going to have to be limited. You can't just send 200 boats a day down that river. There has to come a point, like with the Smith River, it will have to be limited or on a permit basis....You will have to be a resident, and they will give out so many non-resident permits....I don't know what the answer is, but we have to do something to change or we can forget it. (*Park County Local Civic Leader*)

Governance and Regulations Will Require Multiple Strategies and Coordination: It is clear from speaking with local officials that they desire help with coordinating the efforts of the many agencies and entities that have interests in the river. Adding more "interests" is not desirable, but they do desire assistance in managing the multiplicities of their local situations:

The Army Corps holds the key to a lot of future development in Glendive. You might have noticed a dike that was built in Glendive back in the '50s to prevent high water and flooding on that side of the river....Unfortunately,...[the Corps says we are] vulnerable to flooding and high water.... Because of our problem with the dike, and the 100-year flood plain, they are allowing no building, no additions, no anything, on the west side of the river....It is handicapping Glendive. For the community of Glendive, solving our flood plain issue is our number one priority. (*Dawson County Public Official*)

I don't think those are things that we have any control over. A lot of this is going to be Corps of Engineers, Lower Yellowstone Irrigation, Fish and Game. It is not going to be our problem....We just don't deal much with the river, unless it is a road issue. The only dealing we have had with the river is this boat ramp and, there we dealt with Fish, Wildlife and Parks. (*Richland County Public Official*)

The new people want to hunt from the rocking chair on the porch as opposed to the long-standing residents that aren't afraid to get out and hunt. It is not just them and the cannon; it is the house, and the well, the septic, and all the traffic in the riparian areas....Local people hunt and fish and then they leave that [river] area to

go to their house. [The] people coming in want to have their house in there.
(*Custer County Public Official*)

With regard to development, the State ties your hands in some regards. And the worst regard...is that water issues don't need to be addressed under subdivision....We had a subdivision here and it barely has enough water for itself because it is outside of the City of Laurel. If a sub-divider comes in and says he will build a subdivision right here, and the next one comes in and builds here, at what point can we say, 'You can't do this because then [the people in the first subdivision] don't have water'? We can't do that because the State won't allow it....The link to the Yellowstone River is [that] they will eventually say, 'Please annex this and get us water'....We let a subdivision build in that same type of situation...[but] we did require them to put in ponds to recharge the ground for the subdivision below them. (*Yellowstone County Local Civic Leader*)

I am an advocate of local control. I think it should be a local thing....They know that community best. They understand the needs of the community and the different constraints. It should be a ground up focus. I don't think you can say it is 100 percent local. If you are dealing with a river like the Yellowstone, you are dealing with something that affects other states and areas....Local control should be primary, but not the only consideration. (*Sweet Grass County Local Civic Leader*)

I wish they would be more responsive when there was an emergency. We've had some rip-rap that's been washed out in two spots by the Grey Bear Fishing Access. We would like to have got it repaired before flood season. And we still haven't heard back on our permits....[The river] just washed out two pieces probably: one was probably about 15 feet long and the other one was probably 20 feet long. But there's a good chance with high water now it will probably all be gone....So it's one of those deals where we could have got to it right away when we found out it was...and part of that is our problem for not really looking at it close enough until we started thinking about high water. (*Sweet Grass County Local Civic Leader*)

You try to protect [the river] as much as you can through setbacks and trying to maintain water quality, making sure it is used right....It is not just the river itself, but all the animals and the birds that depend on [the river] and its watershed...[including] all of the streams. There are a tremendous amount of streams that enter it. (*Park County Local Civic Leader*)

I'm really hoping we get something in the way of creative solutions, something beyond the floodwall. I think the floodwall was the reactive solution to the situation—it's sort of a 1950s solution. And we know better now; we know more about rivers...[and] I don't think the existing levy gives much in the way of real flood protection. I think we're going to have to have some kind of engineering solution....In a perfect world, [the solution will] involve some kind of service

step-back, designated floodway, and flood plain area, versus trying to build a structure that would require a fair amount of maintenance on the City's part, and [that would] also be fairly destructive of the resources we have in terms of recreation...trails [and] amenities along the river. (*Park County Local Civic Leader*)

As clear as these overall implications seem to be, it is worth noting that that various geographic segments are defined by particular situations and challenges. As one speaks to leaders from the various areas, it is obvious that the pressures to share the river are different in degree and form:

I've never had a call from somebody saying, 'What's the status of the Yellowstone River?' ...It's there, it will always be there. I'm not that worried about it. (*McKenzie County, ND Public Official*)

We have to make sure [future generations] have access and have the opportunity to enjoy the same things that previous generations have had with the river....It's going to get tougher because demand is in its infancy. As the pressure gets more...there will be more issues. Right now, it's in the beginning stage. (*Rosebud County Public Official*)

Bureaucracy is a tool that you can either use to your advantage or disadvantage. The fellow that [complains] probably doesn't realize the benefit he's getting from these layers of bureaucracy. (*Yellowstone County Local Civic Leader*)

Two things come to mind right now. Although I believe in personal property rights,...I believe, too, that...not everybody is going to get everything they want. It just has to be that way. (*Stillwater County Public Official*)

[In this] culture,...nobody sweetens their tea. It's the attitudes. It is a very self-reliant culture,...[an] everybody-takes-care-of-their-own type of culture. The view of government out here is not just suspicious. It is flat-out distrust. If government is involved, something is wrong....In other communities they at least give you a chance to screw up. Here they assume you already have and they haven't found out about it. (*Park County Local Official*)

Even though the differences and the similarities among local civic leaders are numerous, it is clear that they are a dedicated group and that, as individuals, they are nearly limitless in their desires to help the local communities. Each local leader, in one way or another, seemed just as sincere and dedicated as this Park County public official:

Maybe I would like to do something else. But...the thought goes through my mind, 'If I don't do this, who would?' There isn't anybody else....Other people [are now] working and learning...and thank God. (*Park County Local Civic Leader*)

Recreational Interest Group: River-Length Overview

Interviews were conducted with 76 individuals who use the Yellowstone River for recreational purposes, including hunters, fishers, boaters, floaters, campers, hikers, bird watchers, rock hunters, photographers, and others who use the river for relaxation and serenity. Many of the recreationalists participants were recruited from referrals provided by members of the Resource Advisory Committee of the Yellowstone River Conservation District Council. Participants were also identified and recruited by contacting various organizations such as Ducks Unlimited, Walleyes Unlimited and by contacting local outfitting businesses.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|---|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Recreationalists: Analysis Table

River-Length Concerns Among Recreationalists

1. The Yellowstone River Reprieve
2. Respect for the River's Ecology and Its Natural Processes
3. Respect for Other Recreationalists and for Private Rights
4. Access is Difficult and the River is Getting Crowded

River-Length Diversities Among Recreationalists

1. Impacts of Rip-rap
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River-Length Specific Concerns Among Recreationalists

1. Montana Must Maintain the River's Uniqueness and Free-Flowing Character
2. Montana Must Maintain Strong Public Access Laws
3. Water Quality Concerns

River-Length Implications of Recreationalists Analysis

1. Recreationalists Add to Montana's Economies
2. Recreationalist Interests are Linked to Governmental Agencies
3. Recreational Interests are Linked to Agriculture
4. Recreational Interests are Linked to Industry

Recreational Interest Group: River-Length Summary

Introduction

A review of the interview data for this river-length summary suggests that the recreationalists of the Yellowstone River share in four common sensibilities. First, the Yellowstone River is revered for its ability to provide the user with a refuge from the stresses of everyday life. They agree that river recreation helps individuals regain their sense of well-being. Second, recreationalists have the desire to maintain and improve the ecological health of the river. They are inclined to view erosion as a natural process that may not need to be controlled. Third, they have a strong desire to see that others respect the river's resources, the other users and the residents who live along the river. Fourth, recreationalists highly value having access to the river, even though many of them do not reside near the river. However, they worry that the river is getting crowded and that access across private lands is becoming more difficult to attain.

There are two topics about which recreationalists are not in consensus. The first is that recreationalists disagree about whether or not rip-rap causes negative impacts. Some feel rip-rap should not be used because of its detrimental impacts on river ecology. Others feel that rip-rap can be designed and implemented correctly and is appropriate under some circumstances. The second set of differing perspectives is found when examining perspectives regarding the impacts of development. In the eastern segments, recreationalists anticipate an increase in housing development, but they are not concerned about negative impacts. In contrast, recreationalists from the western segments are likely to endorse measures to curb the growth.

Three concerns seem to be at the heart of the recreationalists' perspective when considering the future of the river. First, they are dedicated to the uniqueness of the river, and are advocates of keeping the river free-flowing. Second, they view the public access laws of Montana as essential rights which must be protected against all threats. Third, they attend to water quality issues and are committed to encouraging best practices on the part of agriculture and industry.

Four implications emerge from an analysis of the conversations with recreationalists. The first is that recreational activities add a great deal to Montana's local economies. Many of the changes in Montana's communities are a result of the recreational appeal of the river. Second, recreational interests are linked, often legally, to the missions and purposes of governmental agencies; thus, recreationalists are likely to partner with any agency looking out for the health of the river. The third implication is that recreationalists are willing and ready to collaborate with agriculturalists in order to solve mutual problems. The fourth implication is that recreationalists worry about pollution and other effects of industrial, municipal and residential activities. However, they recognize their loyalties

and interests are often ironically splintered, and so they ready themselves to accept the complexities and difficulties of working to address all interests.

Common Concerns Among Recreationalists

The following concerns are common among recreationalists, regardless of where one meets the individual.

The Yellowstone River Reprieve: The Yellowstone River is a highly valued as a refuge. It provides the solitude needed for regenerative contemplation, and it provides exhilarating physical and social venues that countermand the stresses of everyday life. It provides spectacular beauty, abundant wildlife, varying recreational possibilities and a seemingly limitless medium of change:

It's a very beautiful river. You can start in the western side of the state, and it is very mountainous and beautiful, [and] when you come here, it is more calming and soothing. It is more restful....The sunsets here are gorgeous. A friend of mine took a picture that is just breathtaking....It shows the hillsides reflecting on the water. It's just gorgeous....It's so fun to go exploring on. You can find anything, from recently dead animals, to skeletons, to fossils. So, it is always a pleasure to be out there. (*Richland County Recreationalist*)

I'm in one of those jobs where, if you start to get bent out of shape, you need to walk away from it. It's my mental health that keeps me coming back to that river. (*Richland County Recreationalist*)

I spend a surprising amount of time just down by the river doing not much. My wife makes me pick asparagus while I'm down there. The other thing is the sense of solitude there. (*Treasure County Recreationalist*)

It's a seasonal elixir for my obsessive compulsive disorder. I have two things that I might consider to be OCD: one is pheasant hunting and the other is river rafting. (*Treasure County Recreationalist*)

We're avid touring kayakers. We love to go on the river kayaking and watch the wildlife, the deer, the birds, the eagles, hawks, beaver, lots of beaver....It puts you in touch with nature and the cycles of nature....It's just amazing what diversity you see along the river....It's a pretty special place. (*Yellowstone County Recreationalist*)

When you go down [to the river] you might see somebody else. But you could be down there all day, or all morning, and probably not see somebody else. I have an eight to five job, where I answer the phone 100 times a day and solve everybody's problems, and when I go out duck hunting or fishing or hiking, the only problem is, 'Should we stop here for lunch or over there?' (*Yellowstone County Recreationalist*)

You get on this river and she will carve out a new experience every year.
(*Stillwater County Recreationalist*)

Even though you're flowing down a river valley that is pretty-much paralleled the entire way by a major interstate highway and a railroad,...it still provides an experience of solitude. The natural environment. That's what I try to convey, too, when I'm using the river commercially. I try to convey that experience to my clients. It's not just about going out and catching a bunch of fish, or whatever. It's seeing the eagle's nest, or seeing the eagles, or seeing the other wildlife, or just experiencing the outdoors and having conversations about the uses of the river, or [conversations about] the historical significance of the river as you float along. Those kinds of things. (*Stillwater County Recreationalist*)

You're dealing with a raw force of nature....This river,...it won't tell its secrets....You turn those rocks over....You find those nymphs....You watch the river year round....You put it all together and after three or four years of study, the river might just give you a trout or two...but...by then it becomes not a matter of catching fish. It becomes a matter of you're...one with the river....It has a different character around every bend....It acts different in the spring than it does in late summer. It's different in the winter. It's an incredibly complex ecosystem, that if one person in their lifetime can figure out a little bit of it, it's quite an accomplishment and that's what transcends the actual fishing. (*Park County Recreationalist*)

The Yellowstone [River] is my cathedral. That's my church; that's my spirituality....It's where I charge my batteries. It's my connection to the natural world. (*Park County Recreationalist*)

There are some differences in the recreational uses depending on where along the nearly 700 miles of river one visits. In the east, recreation involves big game hunting, waterfowl hunting, fishing, and agate picking. In the western segments, fly fishing, river rafting, bird watching, and hiking dominate the recreational activities. Yet, all recreationalists agree that the river offers a great variety of possibilities:

We are a hidden secret right now, but that ain't gonna last. I fish on it. I hunt on it. I have a jet boat that I play in the river with. Sometimes you go and float the river and relax. (*Richland County Recreationalist*)

Focusing just on Treasure County, what I like about the river is that it provides a haven, a safe haven for waterfowl, which in turn provides this tremendous population base which we can harvest, and hunt, and recreate. (*Treasure County Recreationalist*)

The river is a multi-use river. It's used for agriculture, it's used for recreation, it's used for generating energy....There's agate hunting, fishing, bird

watching,...kayaking,...water for cities, and towns. I guess that's about it....Oh, [and] mushroom picking. (*Yellowstone County Recreationalist*)

Back east, they grow all of them in hatcheries. One of the greatest things is the Yellowstone has all wild fish. A lot of places, they don't get this. It is like going to a game reserve and shooting birds, versus getting your dog out and going hunting. There is no fascination with a refuge. (*Sweet Grass County Recreationalist*)

Not just the fishing, people come just to float, to walk by it. We have a bench down there by the river, they come down and sit and just look at the river. (*Park County Recreationalist*)

Respect for the River's Ecology and Its Natural Processes: Recreationalists have a strong desire to maintain and improve the ecological health of the river. They are passionate about maintaining the abundance of the fish, game, and wildlife. They often connect the health of the ecological resources to the health of riparian zone, but they do not always agree that the resources are being protected:

I am concerned...that the Fish and Game [is not attentive to] how fragile the river [and] the fisheries are. They have always said the fish would take care of themselves. (*Dawson County Recreationalist*)

As far as fishing goes, the Fish and Game has done a good job of managing the fishery. They don't do a hell of a lot. When I say managing, I mean restricting how much is taken out. They have limited the paddlefish to 1,000 per year. At one time, they were taking over 3,000 fish a year from Intake. The population was in a downward spiral at that point. We were concerned about that. (*Dawson County Recreationalist*)

My number one [priority] would be [to] keep the river natural and clean. Then it's going to take care of itself. The vegetation is going to grow. The fish are going to reproduce. There's going to be good water for all the cities and farm ground. So I think the main issue is keeping the water in as natural a state as possible, not like a dam. A dam puts pretty clear water out because the silt is on the other side of the lake. As much as you can, keep it natural the way it is, and keep it from getting polluted. (*Treasure County Recreationalist*)

Well, I guess Aldo Leopold probably said it the best, 'The flood plain belongs to the river.' (*Yellowstone County Recreationalist*)

The tributaries, the backwaters, the swamp, the sloughs: Nobody has rights to those, as far as I am concerned....Those are sensitive areas. Riparian areas shouldn't be treaded-up....[Those are] nesting habitat. (*Carbon County Recreationalist*)

The cutthroat population is headed in a not very positive direction. They have talked about listing the cutthroat [as endangered]. I am not sure if that is necessary, yet, but I would think it will be at some point. I would like to stem the tide before they have to be listed. (*Park County Recreationalist*)

The desire to protect and improve the health of the ecological resources is coupled with an understanding that the physical processes associated with a free-flowing river are sometimes essential to those goals. For instance, recreationalists generally view erosion as natural function that need not, necessarily, be controlled:

[The course of the river] is always...changing....[It] could change drastically from one year to the next. Every year, it's a change. (*Richland County Recreationalist*)

I prefer it not to be stabilized because I think we need that flood plain to be utilized by the river. It's there for a purpose; even though floods impact a lot of people, it has a lot of benefits too. It recharges the soil. It spreads out water so that floods aren't as severe downstream. So, the more we stabilize our banks, the more we armor them, the more intense the flooding will be downstream. So, that needs to be managed. There must be a master plan for managing bank stabilization. (*Custer County Recreationalist*)

That is [the river's] own renewal. Yeah, it does eat away at the bank, but that's the nature of that. Again, nature is the operative word; it's natural. I guess I don't see a benefit to try to control something that is that big and powerful. (*Treasure County Recreationalist*)

Sometimes it's heartbreaking to see [erosion]....But, on the other hand, it's a wild river and it's expressing itself in such a way that it makes it what it is. It's a living entity that gobbles up one bank one year and might turn around and gobble up the other bank the next year. That's what's uncontrollable and that's what makes it wild and adventurous for those of us who like to get on that sort of thing. (*Yellowstone County Recreationalist*)

[The Yellowstone River] is a meandering river. And you look all over the face of this globe, and see rivers that are in the stage of development that the Yellowstone is, and you'll see that the Yellowstone is doing what it's always done. (*Yellowstone County Recreationalist*)

I don't see that the erosion itself is a huge problem, unless you are a farmer that is losing ground, which is big. I don't think there is much fighting [erosion]. I think rip-rap is a mistake. I think rip-rap is almost an arrogant way that man tries to control a force much bigger than himself. (*Sweet Grass County Recreationalist*)

We have a little erosion every year...There always will be some erosion inevitably. (*Park County Recreationalist*)

Respect for Other Recreationalists and for Private Rights: Many recreationalists express concerns about the habits of others. They are frustrated by the apparent lack of respect that some users exhibit toward the resources and toward other users:

If you are going down there, you are using somebody's property. Whether it is state, federal, or privately-owned lands, you need to respect it. What you take in, you take out. Leave it the way you want it when you go down there....Mostly, the trash that's along banks and stuff...[is from] people throwing bottles and beer cans in the water, [and from] not taking care of the plastic bags and the rings from the six-packs....The birds get wrapped up in those, and then that's not pretty. I've seen some animals that were laying there with [plastic] wrapped around them....Take your trash out. Pick it up, take it home, put it in the garbage can. It's easy. (*Richland County Recreationalist*)

[Just] like everybody, out of 100 hunters, one of them is going to do something stupid, and that's the one they remember and makes a bad name for everybody else...It's up to the rest of us to police them and to keep them in line, which we do pretty well, but people are people. Not everybody has the same value system that we do. They just don't care; they're here for months in their life and they're gone. They don't have to live with the repercussions. (*Rosebud County Recreationalist*)

[There was] a place that had wonderful waterfowl recreation....Now...there are so many kids going in there shooting the ducks....They've absolutely just ruined it to the point where I'm not sure if any of us will go back anymore because there's just so much pressure on it....With waterfowl you can't pressure things too much or pretty soon they'll just go away....I think the only way you could do it is to try to educate [people]. (*Yellowstone County Recreationalist*)

An unspoken [rule is,] if we're out there floating, and somebody's fishing, we try to go on around them. We cut them slack, and not whoop and holler, and jump in the river. We wave at each other as we're going by....It's been that way here for a long time....We're usually all pretty courteous. (*Sweet Grass County Recreationalist*)

Lot of landowners have a problem with [stream access laws] and it's because some of the public is thoughtless and abuse...the river and therefore are abusing the landowner who abuts the river, and that's a little flaw in human nature that's pretty much a constant. (*Park County Recreationalist*)

Access is Difficult and the River is Getting Crowded: Historically, recreationalists have enjoyed access to the river via public access points and via personal arrangements with private property owners. However, recreationalists are aware that fewer and fewer private land owners allow recreationalists to cross their properties. To some recreationalists this shift is an affront to local values. To others, it is more simply illustrates the need to improve public access in areas where the distances between access

points is extensive, where recreational uses are increasing, and where more private landowners are denying or privatizing access:

I hate the ideology of, 'I want to buy my piece of the last best place and then lock it up and keep everybody else away.' I can't see that. Access...[has] to be a key thing. One thing about our rivers in Montana...[that is] different than a lot of other states [is that] the State owns the water—the people...[own it]. (*Richland County Recreationalist*)

One of the concerns around here is access for people to just go fishing. Not necessarily everyone is going to float a boat. (*Dawson County Recreationalist*)

Harder access—access is much harder as it is everywhere. (*Rosebud County Recreationalist*)

If you're going to float the length of [the river], you don't know where you can stop, where it's legal to stop. You're not sure where you might get off to get re-supplied or to have people meet you. There needs to be maps. There are some sections where the access is really poor. (*Yellowstone County Recreationalist*)

Access is a big deal on the Yellowstone. There are sections of this river that you can't get on without camping overnight. Access can be 20-some or 30 miles between access points. With jet boats, it is not a problem; they can just zip, zip. Nothing against the jet boaters, but that upper area is so much more eroded due to jet boat traffic. (*Stillwater County Recreationalist*)

[Ranchers] have sold...the hunting and fishing rights to corporations or private concerns and so only those people can hunt and fish on their property....It's harder for my husband now to find a place to hunt. (*Park County Recreationalist*)

Recreationalists also name a number of threats to the quality of the recreational experience. This anxiety comes from human changes in landscape scenery, overcrowding and changes in the quality of resources.

More people, more and more boats every year. Five years ago, if you went on the river, you might see one or two people. Now, it's not uncommon to run into five or six different boats. (*Dawson County Recreationalist*)

We have been doing it a long time and the traffic anymore....They have big, fancy boats, jet boats....There was one that came by us last year that was as big as a school bus. I thought we were going to sink. It is not rustic anymore. They...[aren't] hunting. (*Custer County Recreationalist*)

I think another problem with people building so close to the river is that aesthetically it's not very pleasing....From what I understand, they're going to put in some riverside trails....Hopefully [those trails] will keep the areas pristine and

wild....It ought to be just like the rims, [with] easements that set aside that [area]....Don't allow people to [build] right up to the river. (*Yellowstone County Recreationalist*)

Everybody wants a little piece of land on the river, and then they build right on the river, which kind of sucks....You go up by Livingston, and you see the houses. I mean, house, after house, after house, after house, built right on the river. (*Sweet Grass County Recreationalist*)

The real-estate developers...know it's wide open....There...are no constraints on developers and I think that's holding a knife to the heart of the Yellowstone....There's no plan. The county planning commission is populated by real estate developers....I see a very deep connection to the river of all of the people here, but nothing that says, 'Wait a minute this is a real gem and let's keep this at least like it is, without further degradation.' (*Park County Recreationalist*)

The increase in recreational users is also seen by some as reason for public attention and careful management. They link recreational activities to the health of the local economies:

I think recreation is very, very close to [generating the same economic inputs as] agriculture....I buy a pickup truck and a trailer. I buy thousands and thousands of dollars of decoys. I buy a lot of fuel. We buy breakfast. We [spend] lease money. We have shotguns, shells,...licenses. When I have guests coming in from all over Montana to hunt with us, we go out to dinner. (*Treasure County Recreationalist*)

Tourism is I believe the second biggest industry in Montana....Tourism relates to the beauty of that river out there and the fish in it. And people come here and spend their money going fishing and hiking and camping. (*Park County Recreationalist*)

Diversities of Opinions Among Recreationalists

Among recreationalists there are a number of topics that generate diverse opinions. These diversities can occur among recreationalists from across the various segments, from within the same town, or from friends sitting at the same table.

Impacts of Rip-rap: Recreationalists disagree about whether or not bank stabilization techniques negatively impact the recreational resources, specifically the fisheries. Some feel rip-rap should not be used because of its detrimental impacts on river ecology. They are concerned that as more and more banks are rip-rapped, the water moves faster causing problems in the fisheries. Others argue rip-rap can be used correctly and is appropriate if the river is threatening personal properties:

If it is destroying somebody's livelihood, acres of some farmland, probably it should be controlled. But, where it is just a natural state, I don't think so. It's

really hard to say because I don't own land down by the river. So, to me it's not a problem. But, to people who own land along the river, I am sure it is. (*Richland County Recreationalist*)

You'll see a lot of places along the bank where they're putting rip-rap and taking big chunks of concrete or rocks and throwing them along the bank to keep it from eroding. That's fine with me, I guess. How else you could you protect it? I don't know what they could do. (*Dawson County Recreationalist*)

I kind of like the idea instead of armoring the banks, use barbs or jetties to try to move the velocity of the stream....You got to take into account the nature of the force you are dealing with, the water. Some techniques are just going to be less impacting, dealing with that hydraulic force, and they are going to be more effective. (*Custer County Recreationalist*)

Landowners put rip-rap or whatever....You just cause the problem to shift somewhere else. I think if you are fortunate to own land on the Yellowstone then you ought to take what it gives you. (*Rosebud County Recreationalist*)

[As] a hydrologist, I studied river mechanics and fluidal geomorphology and from that perspective, the channelization really changes the character of the river. [Channelization] creates...an artificial river system, really. Often times the so-called channel protection work that's done in one place, causes impacts immediately down the stream. The river is not allowed to meander and shift as a mature river like the Yellowstone wants to do. It can cause unnatural artificial areas of degradation and aggradation, or deposition, or erosion of stream materials, or loss of streamside vegetation. We're losing the cottonwood trees and much of the riverine environment is changing as a result of man's uses and developments. (*Yellowstone County Recreationalist*)

There's a guy between Laurel and Billings...that...put big rock jetties out into the river to stop the washing. I don't think it's impeded anything. In fact, sometimes some of that stuff gives the fish more cover, more places to go and hide. (*Yellowstone County Recreationalist*)

I always figured rip-rap made habitat for the fish....They say it's [only for] the big fish, but you can have two people with the same study, one for one group and one for the other, and you will never have the same answer. (*Carbon County Recreationalist*)

It's a real fine balance, in my opinion. I have the utmost respect for other interests....I know we have to work together. So I think that's why it's important that we do strike a balance in terms of some of the things people are looking at. For example, putting the rip-rap on the banks...may prevent erosion of their property and their interests, but, if it's not done properly, it could have some sort of adverse impact on the fishery, which concerns me. And then it takes away from

that pristine environment....I like the fact that,...in this section [of the river, in] very few places do you see any man-made changes to the river. It meanders; it's pretty natural, and, as you can see [today], it's really roaring....When it starts to lower itself down, some new side channels will [form]; there'll be new obstructions,...new fish habitat, and so on. (*Stillwater County Recreationalist*)

I don't see that the erosion itself is a huge problem, unless you are a farmer that is losing ground, which is big. I don't think there is much fighting [erosion]. I think rip-rap is a mistake. I think rip-rap is almost an arrogant way that man tries to control a force much bigger than himself. (*Sweet Grass County Recreationalist*)

When you rip-rap the river, you get a series of jagged turns, big holes, and no ripples, no runs, no flats....It makes everything deep, and it doesn't allow that river to flatten out and create the ripples and runs....From a fishing standpoint, you are much more successful in a ripple, run, or tail-out situation. (*Sweet Grass County Recreationalist*)

The Yellowstone left to its own devices would take care of itself because it is a wild river, but if you continue to rip-rap it....It can't handle that amount of rip-rap. The river goes where it needs to go, and when you change it, it doesn't just affect the flow; it affects many, many things....It reaches a saturation point. (*Park County Recreationalist*)

When you channelize the river, it takes away its wild characteristics....but every time you stabilize that bank, you tame the river more....The Yellowstone isn't allowed to spread out....It stays in one channel and it just digs a big deep trench over the years....A lot of people think [rip-rap] provides great habitats for fish [but]...the fish studies that have been done have documented that surprisingly the [smaller] fish aren't there like they thought they would be. (*Park County Recreationalist*)

Impacts of Development: Recreationalists have differing perspectives regarding the impacts of development on the recreational experience. In the eastern segments, recreationalists anticipate an increase in housing development but voice few worries regarding any negative impacts. Lively discussions of the negative consequences of development occur in the western segments where many recreationalists are in favor of efforts to curb the increase of residential development along the river's edge:

In Sidney, the largest [building] project was the Assisted Living [facility], down by Pamida. That's on a flood plain. I've been in two foot of water, standing right in the middle of that spot. It hasn't flooded since they built it, but I'm not that old. I've been in floodwater right where they built that. That's why we need the Planning Commission. (*Richland County Recreationalist*)

There are very few people in Prairie County that utilize the river. It is very undeveloped. (*Prairie County Recreationalist*)

Decisions would have to be local, but it's going to be tough for a community—for Treasure County or Prairie County—to come to some sort of a regulation. I can see the Council coming up with a template, 'Here is a riparian management scheme regarding development'....Then the county can take it...[and] rebuild it to what their needs are....In Prairie County, they may have concerns about putting feedlots down in a flood plain....That may not be a problem in Sweet Grass County [where] they're worried about houses....[We need some] kind of a template on developing things that will impact that zone. (*Custer County Recreationalist*)

Encroachment of people into the river valleys, you know....That's where I think, maybe, you're getting more of the demand for people to stabilize those river banks because, of course, you've just bought your 100 acres or 50 acres and the river runs through it and you don't want to see it washed down to Billings. (*Custer County Recreationalist*)

When they...develop in the flood plain...their actions can affect others. We have laws that limit what people can do on their property....Their development in the flood plain is not in the greater public interest and the greater public interest is what really needs to hold sway. (*Yellowstone County Recreationalist*)

[We need to] develop setbacks, like 300 feet back, and prohibit any development in the flood plain....We shouldn't allow any building out to the 500-year flood plain. Unless there is a high cliff, there should be a rigid setback in the planning. (*Yellowstone County Recreationalist*)

Recreationalists aren't really happy seeing a house right above them, or a row of houses, and looking on their back decks and patios as they are recreating. And people sitting on their back decks watching the river, or watching people recreate don't always appreciate...people who are having fun [and getting] loud....It is a great little view, but everyone is in view. And people that buy on rivers have to realize that...there are more people recreating. (*Stillwater County Recreationalist*)

I would rather see [setbacks of] 500 feet....There was a guy down-river that had his whole house go into the river....You shouldn't build that close to the river. That is where the setback comes in. If it is back far enough, and the river does change, it has room to change. Instead of saying, 'The river is going to take away my house...[so] I am going to change the river.' (*Sweet Grass County Recreationalist*)

I think one of the things that we see more is encroachment of development in the river corridor....Now you see a big house on the skyline instead of a natural habitat. (*Park County Recreationalist*)

It took three years at least of really difficult meetings to come up with a plan for Park County that was a comprehensive plan....The only way they were brave

enough to approve it was to specifically preclude any zoning....It was all about private property rights....There's many people who don't like planning, think its sort of a communist plot; it is breaching their private property rights. Well, I also own private property....I see it as...a balancing between my rights and my neighbors' rights, and...if the neighbor does something that is really obnoxious to me, do I have any recourse?...So I view it as protection of private property rights...and others view it as an infringement. It's a fundamental difference in outlook. (*Park County Recreationalist*)

Specific Concerns Among Recreationalists

The concerns identified here are, more or less, specific to this interest group. In most cases, the issues are linked directly to the vested interests of these individuals as recreationalists.

Montana Must Maintain the River's Uniqueness and Free-Flowing Character: For many recreationalists the river is treasure that must be appreciated for its uniqueness, for the richness it brings to people's lives, and for its power to impress:

I grew up close to the Mississippi. I was on the Mississippi all the time,...fishing...and a little trapping. Down there it's 'Old Man River.' This one here—this is the 'Prom Queen.' (*Richland County Recreationalist*)

This isn't a Cabela's fantasy....[We've] been making this three-day trip, annually, for 33 years....We build our own homemade canvas-covered boats...[and when] we poked a hole in one, we pulled over and all got to chewing gum and patched it on both sides. (*Custer County Recreationalist*)

It is a symbol of nature and a symbol of godliness....It is at the river that I best understand my role as a human being on this planet. I am part of nature, as you are and we all are. When you stand by the river you have a tendency to realize that. (*Yellowstone County Recreationalist*)

First of all, [the Yellowstone River] is a link to our historical past and...our cultural heritage here in the west. And I'm very much personally oriented towards that concept,...the historical significance....We're floating right down the same river that Captain Clark came down 200 years ago. I think that's important in preserving our western cultural heritage. (*Stillwater County Recreationalist*)

It's a pretty remarkable river. With ten years of drought, you don't hear of problems on the Yellowstone. It's like an old survivor. It's being well used now [and it] can continue very easily. (*Sweet Grass County Recreationalist*)

If you live on the banks of the river, it's a jewel, it's a free river....take care of it...it may be a little battered a little worn, but it still deserves a little TLC. (*Park County Recreationalist*)

Hopefully into the future, this river will throw a flood every now and then and will astonish everyone with its power. (*Park County Recreationalist*)

The free-flowing nature of the river is unanimously important to recreationalists. They cite its ecological uniqueness, its healthy habitats for fish and game, and its importance as a national symbol as reasons for maintaining its free-flowing character:

You don't want to dam this river. This is one of the—the—last wild river in Montana, and it may be *the* last wild river in the nation. There is no dam on the Yellowstone, and we really don't want a dam on the Yellowstone. (*Richland County Recreationalist*)

A lot of landowners are paying taxes for land that's actually in the river now. I think that's all part of that natural free-flowing-river thing. It's been like this ever since the world has been created; why change it now? (*Dawson County Recreationalist*)

I would hate to see them dam the Yellowstone. Isn't it the last free-flowing river, or at least one of the last? When they make changes, like when they put in that Yellowtail [Dam], that seemed to kind of effect the flow. (*Prairie County Recreationalist*)

Without any dams on the river, it goes through a normal cycle like a river ought to, but the channel changes a lot because of that, a lot of new gravel bars come and go, and the river channel moves and changes. I put a boat ramp in here and five years later it's sitting on a gravel bar. So, you can't blame anyone for that; it's just the way it is. (*Rosebud County Recreationalist*)

I would like to keep the Yellowstone a free-flowing river. It is a national treasure. (*Treasure County Recreationalist*)

You know, every other river in the country is dammed, and it is nice to have something that's wild in your backyard. (*Yellowstone County Recreationalist*)

[A free-flowing river] helps with cottonwood regeneration along the river. Cottonwoods are important for breeding birds....Cottonwoods need sandbars to germinate the seeds, and if you don't have a free-flowing river to help shift the course of the sandbars in the river then cottonwoods can't regenerate. And if you don't have trees along the river, it decreases the [habitat] for the birds. (*Yellowstone County Recreationalist*)

Get an appreciation for it...[as] the longest un-dammed river on the continent of North America....And talk about the diverse interests: agriculture, and recreation, and things of that nature. (*Stillwater County Recreationalist*)

I love it. I mean, I've used it my whole life. And I don't think it would be as grand if it wasn't the way it is....I think of this dam [idea], and think of what you would cover up. Think of the beautiful country you would cover up. I mean, for God's sake. (*Sweet Grass County Recreationalist*)

It is the longest free-flowing river in the United States and it should be maintained as that. (*Park County Recreationalist*)

This Yellowstone River is the longest remaining free-flowing river in the lower 48 states. It's...unique in that sense. (*Park County Recreationalist*)

Montana Must Maintain Strong Public Access Laws: Coupled closely with concerns for the unique character of the river are concerns regarding public access. As access via private lands is less and less likely, many recreationalists argue for an increase in the number of public access sites:

Fifteen years ago, if you went up to a landowner and ask permission, seven out of ten times they'd let you go....[But] now, it's paid hunting. They want money, or they have it leased out to outfitters. This river bottom has a lot of outfitters now, where it wasn't [that way] before. (*Dawson County Recreationalist*)

One more thing you can put under important items is Montana needs to maintain its stream access law. That's real critical, although there are plenty of landowners who would like to see it go away. (*Custer County Recreationalist*)

It seems like every couple of years, someone takes a run at the stream access law, and that's pretty important to our way of life....The riverbed is public property, [and] a pretty big asset to us. And, if they take that away, that would pretty much put the kibosh on most uses of the river. (*Rosebud County Recreationalist*)

Montana is blessed. We are blessed because we have a tremendous access law....Compared to Wyoming and Colorado, this is paradise, because people can walk up and down the high water mark and not be trespassing. In Wyoming or even in Colorado, the landowner owns the riverbed, and, theoretically, you can't drop your drift boat anchor on his property because you'd be trespassing. (*Treasure County Recreationalist*)

If you look back at the history of the United States, the public land and the public water have been enormously important. Our champions are people like Theodore Roosevelt and the national forest, the national park, the national wildlife refuge, the national monuments. All of those are part of the public estate, and we think the public estate is very, very important to our society—equally as important as private property....Our position is, what's private is private, but what's public is public and it should be treated with the same level of respect....You can't have private water where the Constitution says it's public anymore than you can have public water if the Constitution said it was private. And we don't just sue every

time we turn around. We talk to people. We try to convince them it's wrong, that they shouldn't do it, but we have a hammer and we'll use it. (*Yellowstone County Recreationalist*)

I can think of a situation where a guy across the river bought a place for fishing. He bought a couple miles of it. The guy on the other side of the river was letting whoever wanted to come and go fishing. [The new owner] didn't like that, so he got a buddy to come in and buy the land on the other side of the river. So now you can't access the river from either side. A lot of that's happening. (*Sweet Grass County Recreationalist*)

Having all of these access points is a good thing...You don't have to be the monied gentry to get to the river and enjoy it. And our stream access law allows...you [to] walk up and down that bank a little bit and you can fish and that's a great thing. (*Park County Recreationalist*)

I have been involved in the fly fishing industry all my life....Those access points are crucial to my business and my soul. (*Park County Recreationalist*)

Water Quality Concerns: Recreationalists link their concerns to the long-term viability of Montana's communities. With regard to water quality, they mention many issues:

When you flood irrigate—they've got all the statistics—if you don't do it at the right time, you can flood out some of your herbicides, pesticides, and fertilizers. That'll go directly into the river systems....A settling pond, before the water could get [back in the river], would be good. Or, reuse the water again, before you put it back into the system.... The settling pond itself would take care of a lot of problems as far as pollution going back into the river....If you're a pregnant woman, there are constant warnings....I don't want to see those [chemicals] going back in there at such a high rate. Put it in a settling pond, let it set. Let Mother Nature do her work. (*Richland County Recreationalist*)

When you go into Fallon from here, you will notice all this white stuff along the riverbanks, from irrigation cuts. I guess it is saline. I am sure that's from irrigation. They haven't been irrigating so long, maybe ten years. I never did notice it before. It's almost like it runs out of the bank....[It] kind of seeps out of the side [of the bank]. (*Prairie County Recreationalist*)

Go back to Sidney, go to the west, and climb that hill. You can see the watershed. Look at the top of the watershed. It is an auto graveyard and an industrial site. And that all flows downhill, right through town and into the river. And that's the stupidest place to build something like that. If they'd gone just over the hill they would have been in a bowl, and they could have kept all of that out of the river. But, there it sits....It's 30- or 40-years-old, and abandoned now so nobody's responsible. And there it sits, [our biggest] pollution runoff issue....At some point, the county is going to own it [and] is going to have to find the money to

clean up that mess. And, you know, it is only about a mile from the Conservation District office. They have to look at it everyday because they are on that same hill. (*Richland County Recreationalist*)

You might want to take a look at spill response on the railroad. The railroad parallels that river for a long ways, and if you have a train wreck, how do we get to that stuff? It's pretty isolated, rural, most of this point. How do you get to it? Is the railroad in a position to get materials on that river to sop anything that's spilled into it? Probably not. And that railroad ownership changes hands from BN Santa Fe to Montana Railways, so really, [you've] got two railroads that traverse the Yellowstone. (*Custer County Recreationalist*)

It seems like the feedlot runoff is not being regulated very well. If you look at the size of feedlots now, they are huge. You can see one on the north side of the Yellowstone, a big brown streak running right parallel to the river. I mean, where's all that runoff going to? (*Custer County Recreationalist*)

I suspect that a lot of our fertilizers and poisons and stuff get into the river. I don't think that's good....[It comes] from agriculture, [but] not just agriculture....[It's] from our town [too]....We need to educate everybody more on all that....Everybody used to [think] more chemicals will do the job better, but that's not necessarily the case. People need to be knowledgeable about what they're putting in there....I think they're getting better, but people are still thinking a little bit more is better....It's hard to get people to understand that. (*Treasure County Recreationalist*)

[When] the high water comes, or you have an ice jam, or...the spring run-off [comes], you flood your septic tank or cesspool...[and] that material in that pool goes right into the river. There's a capacity for the Yellowstone....You can exceed that capacity, and then you have a real problem....We need those setbacks. (*Yellowstone County Recreationalist*)

Regrettably the water quality particularly below Laurel has been compromised in places primarily as a result of agricultural use along the tributaries. And stream flows have been reduced to undesirably low levels during the summer. That's a result of large diversions on the river. (*Yellowstone County Recreationalist*)

You go down the Stillwater and they have sewer problems like crazy because the sanitarian let them build too close to the river. There is no way it can not violate the water table. It has happened several times with this community [because] the sanitarian, who got fired over there,...came over here. They allow people to build right on the river, and they allow them to pump their sewage up the hill so they can pass a perk test. That is not in the interest of the community or the resource....I think it [comes down to], basically, how well you know the sanitarian. I know he is congenial with some, and not so much with others. As far as septic law is concerned,...I know you have to have your septic system 100 or

150 yards away from your well. Other than that, it is where [the sanitarian] determines you can get perked. It is really a gray area. It is violating the water table on the Stillwater. Every time we allow someone to build on the flood plain, it is a public liability, from a water quality standpoint, from an erosion standpoint, and a liability for FEMA when the sanitarian allowed that to happen. (*Sweet Grass County Recreationalist*)

The longevity of the Yellowstone and making sure of our water quality [are both important]...I honestly think we could make it better. We have irrigation upon irrigation, [and] that...water is coming out and going back in. You should have to send water from a field that is maybe not as clean, [and]...run it through a panel or something to clean it up. I don't know the solution. I am not a scientist, and I don't want to make it hard on the Ag community. Sometimes they put garbage water back in there after taking palatable water out. The wild fisheries in the states are evaporating. Colorado has had whirling disease so bad that a lot of their natural fisheries had to be helped by the state. I would say, when I am dead and gone, that river is going to be rolling like it is today. (*Sweet Grass County Recreationalist*)

Of course you've got septic tanks and lawn fertilizers and the cutting down of the trees. I think that development is probably one of the biggest things [and] one of the main problems...on the Yellowstone. (*Park County Recreationalist*)

Development brings sewage....My neighbor...[has] the sprinkling system. [He] waters that five acres every night and then he puts chemicals on there to keep the dandelions down...and all of that is just going right back into the river eventually and into our aquifers. (*Park County Recreationalist*)

What resonates from both sides...is water quality....[But what is] water quality? Is it simply the chemical analysis?...Or is water quality [connected to] the system?...If you started from water quality, and worked gently outward...describing the mountains that create water quality, then there may be an incremental way to bring people into consensus. They [need to]...fundamentally understand why this water is good and why it is bad. Start from why is water so important to us. It may sound elementary. (*Park County Recreationalist*)

Implications of Recreationalists' Perspectives

Recreationalists may be playing a more of a financial role in local and regional economies than many Montanans realize. Not only is Montana's population growing, but a significant portion of that growth is occurring in the communities that border the river. Park and Yellowstone Counties have the most obvious increases in population, but Sweet Grass, Stillwater, and Carbon Counties are also growing. Each of these counties is experiencing increasing recreational pressures. Life-long residents and newcomers view the recreational opportunities associated with the river as a key component in their

quality of life, and recreational opportunities are linked directly and indirectly to the new economies of several Yellowstone River communities. Towns benefiting from the economic inputs of recreational users must ensure that they preserve the ecological resources that draw people to them. The agrarian landscape and the undeveloped river are attractive to tourists, floaters, anglers, rock hounds, hunters and others.

Interrupting the river viewsheds with homes, developments and human obstructions may jeopardize the Yellowstone from being seen as a remote experience. If the banks were lined with homes, then there would be no reason to travel to Montana. As one recreationalist noted, 'No one wants to float through a subdivision.' Access opportunities, promises of abundant wildlife and healthy fisheries are appealing. For communities to maintain their recreational appeal, visionary measures may be needed. Calls for stricter planning regulations are not simply applauded by recreationalists, as they often initiate those calls. Landowning recreationalists do not tend to view zoning regulations as an assault on their individual private property rights. Rather they see regulations as a means of protecting everyone, including themselves from irresponsible neighbors.

Of course, the "crowdedness" of one's recreational experience is a subjective matter. For newcomers, the river is a terrific recreational resource regardless of where they access it, whereas long-term recreationalists view the western segments as nearly intolerable and they have taken to traveling to the eastern areas as a means of escaping the throngs. The solitudes of the smaller communities are appealing to recreationalists, and positive experiences in a particular environment often engender a sense of attachment. Recreationalists are known to return repeatedly to their favorite places.

The increasing numbers of recreational users are changing both the economic structures and the cultural character of many of the smaller communities found in Eastern Montana. As positive impacts, some recreationalists who travel to the smaller towns shop at the local stores and use the local guides. Their desires for recreational solitude also prompt them to purchase exclusive leases and in these ways local economies benefit even when residential development is minimal. Unfortunately, as more lands are privatized, access becomes limited and the local friendliness of the small town seems to slip away.

Notably, many of the specific concerns that recreationalists voice are more generally mandated as concerns of the state and federal governments. Many of their interests are explicitly protected by law. For instance, regardless of the fact that over 80 percent of the riverbanks are under private ownership, the public has a legal right to enjoy the resources of the river. This is indisputable under the current access laws and it is obvious that recreationalists will vigorously oppose threats to these rights. Concerns regarding the health of the fisheries are on-going and extend far beyond the desires of weekend fly-fishers. Water quality degradation simply cannot be ignored by any level of government. The number and management of public access sites connect recreationalists to agencies. Some recreationalists worry about the effects of bank stabilization on the river ecology. They worry that communities are compromising the riparian zone via channelizations, but they are not, as a group, certain about the effects of rip-rap on the ecology of the Yellowstone River. Recreationalists recognize that their interests are often closely

connected to the interests of various agencies, and they work to form partnerships and to maintain positive relationships with such entities. Their passion for improving the health of riparian habitats and their concerns about pollution demonstrate that many of them are conscious of the role of riparian plant growth in the health of the river system. Such enthusiasm for the ecological health of the river suggests there are opportunities for educational outreach and volunteerism that could positively affect the health of the river.

In many communities recreationalists are agriculturalists. They are only artificially designated as a distinct group. In other communities, recreationalists have different social networks, financial resources and expertise that could benefit agricultural communities. In either case, recreationalists appreciate the scenery and wildlife habitats that agricultural lands support, and the maintenance of the agricultural activities along the river is a priority for most recreationalists. Recreationalists appreciate the access granted by agriculturalists, and they consistently expressed sympathy and understanding for the financial and cultural difficulties agriculturalists regularly face. They understand that private landowners experience trespassing and other abuses by recreationalists, but they are quick to mention the block management program as an example of positive collaboration by recreationalists, land owners and state agencies. This program is viewed favorably because it is seen as being fair to all involved. Landowners retain control over who is on their property and responsible recreationalists gain access. Nonetheless, recreationalists and agriculturalists tend, at times, to take adversarial positions. Most often the schism results when recreationalists pressure agencies to deal with the pollution problems caused by farming and ranching practices. Agriculturalists should expect recreationalists to continue to press for the adoption of practices that can decrease the agricultural pollutants found in the river and the riparian zones.

Recreationalists also tend to be aware of local pollution events involving industrial sites, chemical spills, sewage overflows, outdated septic systems and flows from lawn chemicals. They are often uncertain as to whether or not these newsworthy events had been resolved, and they are unsure of the lasting impacts to the river and their communities. Such uncertainties regarding pollution on the Yellowstone constitutes an opportunity for developing informational sources that can be trusted and for potentially engaging groups in monitoring programs.

Most importantly, the recreationalists who participated in the study are members of particular communities. Their personal interests are often fragmented, and they understand that good answers are not always simple. Some work at the local power plant and some are farmers, but without fail they are committed to working *with* others:

You can't impose your ideas. You need to involve everybody and all sides. The difficulty is...all sides feel threatened....A good process has to be inclusive and usually that is tedious and difficult to do....The hard part is paring away the rhetoric and getting down to what it is you actually value, and what threatens that. Not your fears, but the reality. It's really hard to...trust people enough so you can actually talk about the real issue. (*Park County Recreationalist*)

Residential Interest Group: A River-Length Overview

Interviews were conducted with 76 individuals representing the residential interest group. To recruit these participants the names of property owners holding 20 acres or less of land within 500 feet of the bank were obtained through a GIS search of public land ownership records. Twenty acres was used as a screening threshold to separate people who lived along the river corridor but whose incomes were from something other than agricultural practices (residentialists) from those who were predominantly farmers or ranchers (agriculturalists). The names were sorted by county and randomized. Recruitment proceeded from the county lists. A few other people living very near the river were also recruited. These additional participants may not have had property that technically bordered the river and/or they may have owned more than 20 acres. In all cases, the recruits did not consider agricultural as their main source of income.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|---|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Residential Interest Group: Analysis Table

River-Length Common Concerns Among Residentialists

1. Living Near the River Adds Quality to Life
2. Wildlife Is Appreciated
3. Concerns Regarding the Water of the River
4. Keep the Yellowstone River as Free as Possible

River-Length Diversities Among Residentialists

1. Erosion and Flooding Concerns
2. Flood Plain Restrictions and the Role of Governmental Agencies
3. Rip-rap as an Appropriate Method for Protecting Property

River-Length Specific Concerns Among Residentialists

1. Private Privileges and Public Rights
2. NIMLYs—Not In My Lifetime/Years
3. The Impacts of Development

River-Length Implications of Residentialists Analysis

1. Potential to Promote Health of the River
2. Potential to Reduce Public Access
3. Free-Flowing vs. Controlled
4. Dissimilar Understandings Suggest Need for Educational Programs and Materials

Residential Interest Group: A River-Length Analysis

Introduction

A review of the interview data for this river-length summary suggests that residentialists of the Yellowstone River share in four common sensibilities. First, they are unanimous in explaining that the Yellowstone River adds to their quality of life. Second, they are avid wildlife watchers and observers of the seasonal migrations. Third, they are generally concerned about water issues, wondering variously about quality, quantity and future human and industrial needs. Fourth, residentialists are generally enamored of the idea of the Yellowstone as a free-flowing river.

There are three topics about which residentialists are not in consensus. The first is that residentialists explain varying understandings of erosion and flooding processes. The second set of differing perspectives is found when examining comments regarding flood plain restrictions and the role of governmental agencies. Third, while many residentialists hold strong opinions concerning rip-rap, either in favor of it or against, only some residentialists are apt to discuss the complexities involved in deciding the circumstances under which rip-rapping should be approved. With regard to these three areas of disagreement, the differences are most pronounced when one compares the residentialists of eastern segments to the residentialists of the western segments.

Three concerns are of particular interest when considering the residentialists' perspectives. First, residentialists are especially protective of their property rights. They value their privacy. While they generally acknowledge the public's right to be on the river, they express varying degrees of understanding for recreationalists who violate the "high water" designations. They mostly oppose recreationalists using their properties as if they are public access sites. Second, when asked if they worry that they might be flooded or that the river might erode the bank away, there is a sizable group of residentialists who agree that over time such possibilities are real but who also explain away these threats by saying, "Not In My Lifetime/Years." These residentialists were identified as NIMLYs. They are residentialists who view the river as mostly benign and who see no real threat to their properties. The third particular concern of residentialists is that they believe unchecked development near the river will eventually either ruin the privacies they have come to enjoy or force the sale of their homes as they will not be able to afford the subsequent increases in property taxes.

Four implications emerge from an analysis of the conversations with residentialists. The first is that residentialists are potentially strong allies when looking for individuals to support practices that will promote the health of the river and the riparian areas. However, at this point some are not well enough informed to help. A second implication is that further residential development will decrease the informal paths that the public

uses to access the river. Pressures will build for more public access sites. A third implication involves seemingly incompatible wishes. They appear to want a free-flowing river and the ability to protect private property. Given that the first wish is to some extent compromised every time the second wish is granted, it seems guidance is needed in the local communities regarding how to avoid further complicating matters with increasing riverfront developments. Finally, given that residentialists articulated so many different opinions and perspectives, it is apparent that every influx of new people and every new generation of adults will need to be educated and assisted in understanding the river, the management strategies, and the constraints of local governments.

Common Concerns Among Residentialists

The following concerns are common among residentialists, regardless of where one meets the individual.

Living Near the River Adds Quality to Life: Of all the participants interviewed for this project, residentialists were perhaps the most passionate in their explanations of why living near the river is important. Their lives are enriched by the Yellowstone River:

[If] somebody asks me where I live, I tell them, ‘Right on the Yellowstone River.’ I probably don’t even mention much about the house itself because that is almost secondary to me. Living on the river is very important to me. [As a child], I could throw a rock from my house to the river. I always thought that was kind of neat. I mean, the river that Lewis and Clark used was, basically, a stone-throw away....I just love being on the river. I love getting up very early in the morning, just before light, and getting on this river and not encountering another person. And seeing all sorts of wildlife, deer, turkeys. This winter there were a lot of bald eagles. (Dawson County Residentialist)

My husband and his brother had their picture taken two years ago, by [the local newspaper], and when it was printed it was capped, ‘Fishing Buddies.’ This is one of my brother-in-law’s favorite pictures. I had it...framed, and gave it to him for Christmas....It is hanging in his living room and I know he just cherishes that picture. (Dawson County Residentialist)

I have a fantastic view; the scenery is wonderful. In fact, people that come here...say, ‘What a beautiful view you have!’...It is just beautiful. (Prairie County Residentialist)

[It’s] less populated, thank God....I like it here. Open, Big Sky country—that’s us. I don’t know how the western part of the state can claim that. [There are] too many mountains and trees. (Rosebud County Residentialist)

We’re pretty fortunate to live in Montana. I like it. Not many people. And that suits me fine. (Treasure County Residentialist)

I've always gravitated towards it because it's always relaxed me....My church is the river....The fog comes up off the water....The sun pops up and your line is singing out there and you look down and see the little crystals on it, then I look down and see a herd of elk crossing a couple hundred yards from me. It gives you....It's what drug addicts are, the reason they're drug addicts....It gives you that feeling...with no side effects,...other than you're hooked....I'm not leaving here....This is a place to keep forever. (*Yellowstone County Residentialist*)

We're right along side the river....We just love the area out here. We didn't want to be in Billings....We do a lot of fishing and hunting and floating and, you know, that kind of thing, and rafting....Just the trees, and that there's nobody between us and [the river] so it's quiet. Solitude. (*Yellowstone County Residentialist*)

Everyday I walk down my hall, and I have a new picture window. And you know, it's just awesome. The colors in the fall are beautiful, [and] most of the time the sun's shining on the mountains. We can see Granite Peak, we can see all kinds of activity in the river with geese, and we just love it, it's just awesome....My heart just feels so good. This is our place. (*Stillwater County Residentialist*)

Paradise. It's just great, great living. Private and beautiful. We are so lucky and privileged to live here; it's just wonderful. We have about two and a half miles of riverfront, so we don't have any neighbors close, and it is just great....The river is the reason we are here. It's the whole thing. There is constant action going on at the river, whether it's birds, or fishing, or deer, or whatever. There is always wildlife around which is our great love. We cultivate our land for wildlife. (*Sweet Grass County Residentialist*)

I feel real fortunate to live here. I mean, they call it Paradise Valley and it is. (*Park County Residentialist*)

The river is actually magical. I made the mistake of actually taking relatives on the river and now they want to come back every year. (*Park County Residentialist*)

Wildlife Is Appreciated: Of specific importance to the residentialists are their immediate and daily encounters with wildlife. Whether they observe from their windows, take daily walks or spend the weekend relaxing outside, they are able to offer exhaustive inventories:

Oh, the wildlife. We can see wildlife all the time....I like nature....There's never a day that I don't get up and look at the river and be thankful that I'm right where I am....It's our 'Little Eden.' That's what we call it. (*Richland County Residentialist*)

People here enjoy going up the river and putting their boat in, and floating down. It takes two or three hours to float. It is just beautiful. You see crops, you see deer, you see beaver, you see rabbits. (*Dawson County Residentialist*)

The pelicans keep coming back and increasing....The bald eagles seem to be doing well. And we had a couple of osprey nests on the bridge over the river....I hope the people don't get overpopulated and push the animals away....[Maybe we should be] making areas along the river where nobody can go for a short ways because it's closed as a pelican relief or something. There must be a way we can give the rare animals...or endangered ones a private place to hide, [or] at least nest. (*Rosebud County Residentialist*)

I do like to fish, and we have a river boat. I enjoy that. There is a lot of wildlife. I like to hunt. I enjoy that. As far as recreation goes, there are a lot of things to do. (*Treasure County Residentialist*)

[We see]...eagles, ospreys, [and] we wanted to make sure they have places to stay so they can come and entertain us, which they do, constantly. It's just amazing....It's fun to watch them battle the eagles when there's a catch in one of their claws....I didn't realize that an eagle could actually fly inverted with the fish—you know, roll over on its back in flight to address the threat. It was wild. Oh yeah, I'd have a \$100,000 tape if I'd have just had the camera. (*Yellowstone County Residentialist*)

[I] absolutely adore the choice of the location....It changes daily....It's alive....I would say that I'm one of the luckier guys in the world to have this view,...this untamed river that I always brag about....There's two of my [Canadian geese] parents out here going down with 12 of their babies....We see all the ducks,...the muskrats and the snakes....We'll have an eagle fly by and an osprey dive in the river....I'm a happy guy here. I've never worked a day out here, but I've sweat and toiled a bunch, but every bit of it has been so enjoyable. (*Yellowstone County Residentialist*)

There is a lot of wildlife out here....We see deer, turkeys, pheasants,...bears, cougars,...mountain lions, elk. There was a moose here....A big bull came across the river....The river is like a corridor for animals to travel, and they will move great distances along it....They actually use it like a highway, so you see a lot of different animals come through....Geese, ducks, sandhill cranes, two pair of bald eagles, and a couple pair of osprey....We have feeders up, [and we've seen]...probably 30 species that we identified in a book. We are not bird watchers, per se, but we just write down what we see, and we kind of expect them when they come. (*Stillwater County Residentialist*)

The beauty of our surroundings. You have all the wildlife, the birds. It's just fun to see all of that down at the river. The different birds,...the pelicans,...eagles nesting....It's kind of a sanctuary....It's a habitat....The blue heron's nest, and the

rookery. And it's unbelievable...the number of blue herons....There's a lot of bald eagles on the Yellowstone. I think that's a wonderful quality. (*Sweet Grass County Residentialist*)

We're in the elk migration route. They've been migrating from Yellowstone down here for 10,000 years....They migrate off that flat up there on the top and come down here to the lower lands and...and they feed in that big grass field across the river....[and] they...come across the river to the islands....I just enjoy watching them. (*Park County Residentialist*)

We...even [had] a black bear last week, right in the yard....My son was sitting across from me and he said, 'There is a black bear,' and I thought he was being funny. I said, 'Yeah, sure.' He said, 'There is a black bear!' And sure enough there it was. The dog saw it and when it barked it took off. We haven't seen it since. We keep anticipating it will come back. (*Park County Residentialist*)

It's hard to believe but,...about two months ago,...way up on the top of the hill, there...[was] a mountain goat [and] I went out on the porch one day and a pronghorn was walking down the road and looked at us and a moose. (*Park County Residentialist*)

Concerns Regarding the Water of the River: When asked about any concerns they have regarding the river, residentialists often bring up water quality and water quantity issues. The specifics of their concerns vary but, taken as a group, the comments suggest that residentialists are paying attention to the water itself as the key resource. Comments concerning water quality issues include:

The irrigation...in this area has been here since the '30s....Stop and think of all the water that's being diverted out of that river from up around Columbus...clear to the mouth of the river down, here. How many gallons are being pumped up on the ground?...Look at all the contamination and pollution from all the pesticides. (*Richland County Residentialist*)

I [am concerned about] pollution [in the river], because it is our water source. You know we need to protect our rivers. If there is an industry that comes in, you can't let...[the river] be polluted. (*Dawson County Residentialist*)

I don't know much about this methane, but I sure would hate to see it come in and ruin things....If they let it run down the river and we can't use it for our crops, or can't use it for our livestock, or it will kill our wildlife—that would be horrible. What good would the river be? (*Prairie County Residentialist*)

The water and sewer was one big issue that we got over there....If your septic tank goes bad, [the city] won't let you put in another septic tank. But they won't furnish [us] with city sewer....I just believe that...if you're living in the city, they should provide water and sewer. (*Custer County Residentialist*)

I'm concerned about people dumping stuff into the river....I've heard there's still places dumping toxic chemicals. I don't know if it's true or not. That certainly shouldn't be tolerated. (*Rosebud County Residentialist*)

I know there's an awful lot of pollution around....My concern is with the refinery, but I have to be careful about that because they were there before I moved in and I know they were there before I moved in....I would like to see the refinery...closed, but that's wishful thinking. Quite honestly, I don't know what they do to [the river], but I'm sure there's something that goes on, even if they say there isn't. (*Yellowstone County Residentialist*)

The Yellowstone River really stinks after Laurel. I mean, not that I want to lose the refinery or anything....I don't know if it's necessarily the refinery or if it's just that it's more populated from Laurel to Billings, that stretch. I don't know really what the problem is. But there's no good fish after Laurel....Keeping it clean is my biggest thing. (*Yellowstone County Residentialist*)

You get people [in the subdivision] that think they are farmers and ranchers, and they are going to flood irrigate. Many things happen when you flood....[I was worried they would] flood my septic system, and I would have to go in and put an above ground septic system. I went to the lawyer and did some research and found out...that if you don't use [a ditch easement] for so many years [they can't use it]....Water hasn't been through here for 30 years. They are done....Who in the hell wants their septic flooded? That is the stupid thing about leaving water rights with the subdivision. Wells are a different situation. Water rights for flood irrigation should not be left with a subdivision. I think they should go back and get rid of them....People come in, and put in a septic system, and Joe Blow wants to start flood irrigating, and he is above [us]. It won't affect him, but he will get everyone downstream, and he doesn't give a damn. That is human nature. (*Stillwater County Residentialist*)

I think they have to be real careful with septic, and things like that polluting the river. I think they are already doing that. I don't think we could build here today, and have a septic system. I don't think we could ever get away with it, or ever get approval. (*Sweet Grass County Residentialist*)

The sewage overflow...[at] the plant...in Gardner....If we have an outage, they didn't have a switch that would cut it over to emergency generator to keep it going...until...the guy...working part-time get[s] there to start the generator....The concern that I have is Yellowstone Park should have their own facility and not be using Park County's facility. (*Park County Residentialist*)

In the last two years, in the spring run off...the river turns...orange and...it's coating over the rocks and everything....So there's run-off that's coming from somewhere. (*Park County Residentialist*)

Comments regarding the quantity of water available include:

Another one is the lack of water....By August, you can wade across the river, here....There seems to be less water, a lot less. (*Richland County Residentialist*)

We should figure out a way to replicate whatever the river flow was at that time, [Lewis and Clark's time]. So, it should go up in the spring and down in the summer. Whatever it takes to maintain that flow—let the cards fall where they may....Whoever gets the water, gets the water. You don't artificially give more water to one person because you hold back water [behind a] dam....Obviously, it has implications for energy generation, and recreation, and floating barges downstream,...but I think that is the only fair way to do it. (*Dawson County Residentialist*)

I would put a moratorium on any more irrigated lands, period. No exceptions,...because there's too little water, and too much land. Irrigated farmers...take as much water as is legally available, and sometimes more than is legally available. And, as time goes, the cities and towns that take water from the Yellowstone are going to be demanding more and more. That, also, has to be stopped....We, for example, take water from the Yellowstone and from a well. Well water, especially on the scale that is used in a municipality, is extremely expensive. This is one of the things that people are going to have to get used to: paying for water in the cities. And, when I say pay for it, I mean a reasonable amount. (*Prairie County Residentialist*)

Recreation...doesn't use up water....I mean, you're using the water for play but you're not using it up....The growth in the community certainly could use more water, and I worry about agriculture, because I know...people are tending to take a lot more water than they have water rights to. It's a concern....Number one, enforce the water rights that the farmers and ranchers are using....[I know] that's their livelihood, so I'd hate to see that taken away, [yet] we have to have water to drink. (*Custer County Residentialist*)

I wouldn't mind some water being diverted off into a big reservoir, so we can store water. That'd be nice...and I always thought we should try to hang onto as much water as they'll allow us to, instead of just letting it flow into the ocean, because we need it here. We live in a semi-arid desert. And sometimes the river gets so low, we're losing out on species of fish that need water to live in...[and] when the water table goes down there's certain types of trees that can't make it, too. (*Rosebud County Residentialist*)

The big thing for me is the low water, the low water levels, but I'm not sure at this point what you can do. There's not a lot upstream that you guys can do to force it down stream. You know we rely too much on the snowfall. (*Yellowstone County Residentialist*)

If you believe in global warning, I think [lack of water] will be a problem everywhere....There is apparently some evidence that there is getting to be too many people. (*Yellowstone County Residentialist*)

Being an agricultural state, the river is very important all the way down....They've used it to irrigate croplands for years and years. I know...[because] I did a lot of crop insurance....We're such a great food source, for ourselves and other countries. I really think agriculture should have as much [water] as any. (*Stillwater County Residentialist*)

I just take it for granted....It is just there. It is a part of everyday life. We don't play on it a lot. Occasionally, but not very often. I am not a fisherman. We float it once in a great while. Go down and picnic once in awhile. I can't say it is important to me....It is not something I have to deal with on a day-to-day basis. I view it more as recreation than anything. (*Sweet Grass County Residentialist*)

We're going to have a leasing meeting over on Mill Creek with the watershed group next week, and a lot of people are feeling that they're coming up short because [one guy is] leasing his water rights [to provide for the fish in the creek]. It is going to affect me, but we have a law that says, if it's beneficial use, you can do that....Fish and wildlife...[are] beneficial according to our legislature now....And, let's face it, I'll be the first to say, that sometimes the fish in that creek are worth more than the hay I'm raising....[Most people] got their irrigation systems put in by the government—not totally free, but with lots of grant money—that was ten years ago....[Now, with this guy leasing his water, another] says, 'It's not fair.' Well, it may not be fair, but you did get a new pivot...for half-cost....So, I don't know. It's tough. I mean, that's going to be a real contentious meeting....We have water rights, but we dry up Emigrant Creek every year. So I can see both sides. But sometimes I [ask about the] outfitters and how much money they make on the Yellowstone River—it's tremendous. (*Park County Residentialist*)

Keep the Yellowstone River as Free as Possible: Along the course of the river, residentialists generally value the idea that the river is free-flowing:

The river is going to take its course. I don't think man is smart enough or huge enough to change it. They have poured millions of dollars into rip-rap on the Missouri, and it has failed. I hope they never do it in the Yellowstone....Let Mother Nature do its thing, and it will be fine. It always has been. Don't try to change it. (*Richland County Residentialist*)

I don't see any problems with the river if they don't do anything with it. Don't mess around with it. Leave it as a free-flowing river....It's got a couple of diversion dams on it, and they are probably needed for the irrigation, but...I wouldn't want them to build them any higher.... I never want to see the river blocked off. Never. (*Dawson County Residentialist*)

We appreciate the fact that [the Yellowstone River] is a free-flowing, long stretch of...water, which is so rare....We'd hate to see anybody improve it for irrigation or something by throwing [a dam] across [it]. (*Prairie County Residentialist*)

The Yellowstone is always there. It can get low, and I mean really low, and it can get really high. I've seen it in flood stages, flooding over on the north side, way over. But, it's always there; it's always flowing. In the winter time, it freezes over,...but you know it's there. It's a constant. I like that. I need that in my life. (*Rosebud County Residentialist*)

If it wasn't for the financial reasons, I would rather not have the dike and let [the river] do its thing....Had it never...had a dike, when the river got high, it would come and spread over the whole area....Maybe it would spread more gradually....You would have a bigger area, but not as much force...and there wouldn't be as much damage as with the dike....It would come up and flood,...and would cause a bit of damage on the bank....You would have junk, but that wouldn't be hard to clean up....If it had been let go, I am sure the channel would be wider than it is now. There would be some islands and...I don't think you would have as much debris....The high water would carry it away....It wouldn't pile up as bad. I might be wrong, but I think that is what would happen....[However], it is financially impossible [not to have the dike]. (*Treasure County Residentialist*)

For all the trouble it is, I still like the idea of the Yellowstone just running free. That's more about the aesthetics and the recreation thing....There's a lot of stuff,...the wildlife, the floodplains, the swamps, all those things you have because it runs free. All the changes it has from year to year. It's really important....I can see the dam....There will be a lot of advantages to control the flow of water. But I think we are back to economics....Irrigation—there needs to be more ditches. No flooding if you have a dam to control it. Plenty water for the growth [for] all these cities. (*Yellowstone County Residentialist*)

As long as it stays natural, that's the best. No dams, no changes. Just leave it...like it is today. I mean, I wouldn't like to see anybody going out there and building something in the islands, or anything else....I like to watch the river come up in the spring and go back to normal. And just, you know, wait for [William] Clark to come down. (*Stillwater County Residentialist*)

The public, and myself included, we need to have some available information....We [weren't] really good stewards when we moved here. We've done some rock work along our bank, and there wasn't anyone there [to advise us]...unless we could have paid for professionals....But at the time we couldn't afford it....If there's some kind of grants that may be available so you can hire a professional—if those professionals really have the answer—that's a question...I have. (*Park County Residentialist*)

Diversities Among Residentialists

Among residentialists there are a number of topics that generate diverse opinions. These diversities can occur among immediate neighbors, but they can also appear as differences along the length of the river.

Erosion and Flooding Concerns: It appears that the floods and devastations that occurred in 1996 and 1997 left lasting memories on some communities but not others. Put simply, those who suffered major impacts seem to have lingering concerns regarding the need to protect properties from the river. Near the confluence with the Missouri River residentialists are most likely to view the river as a kind of behemoth that will defy human efforts to control it. Upstream residentialists value its free-flowing character but also value efforts to protect properties:

The Yellowstone River hasn't changed much since it formed. It isn't like the Missouri that can cut 400 to 500 yards out of a bank in a year. You don't see that here. (*Richland County Residentialist*)

On my place there is a big meander, and it is starting to cut right across there. It wants to form a sandbar here. Maybe in 100 years or 200 years it will go right across here. (*Dawson County Residentialist*)

The changing of the channel, at least in the areas that I have looked at, has been so infinitesimal. There's no way in the world, unless we get a tremendous deluge like the 40-day rain, that the river could change enough to do any actual damage....You'll find a farm in an aerial photograph, or you'll find a piece of land that came to one farm when it was taken off the other side....The biggest one is near the town of Savage. The river changed channels there, probably 150 years ago. It moved about half a mile. (*Prairie County Residentialist*)

I think erosion is a natural thing, and that we should live with Mother Nature. I mean, the river's supposed to meander, so we'll have to live with it. (*Rosebud County Residentialist*)

I know that it's eating up the bank on this side....The bank has really caved in....They've tried different things, but everything they seem to suggest the Army Corps of Engineers says, 'Nope, you can't do that.' They've tried rip-rap in different areas in different ways, and the Army Corps said, 'Nope,...it's not ecologically safe, or it's not economically feasible, or it wouldn't work'....I would like to see [something] because I don't want my river to go away, and I don't want my town to go away. (*Rosebud County Residentialist*)

It's a vigil every year to keep up with the river, to see if it's going to take out some more of the property. It's a living creature, that Yellowstone. (*Yellowstone County Residentialist*)

The power of that river....The water comes up over that bank, and it just rolled. It was like a big roller coming at you, and it was the water coming over the banks, and the force of it, when it moved that huge ice up on the land, and it came around there, and it went all the way up to the neighbor's house before it broke. And it broke fairly fast. (*Yellowstone County Residentialist*)

The river took that island out in about a week and a half. It had 50 to 60 feet cottonwoods. It was just covered in trees. It just took it right out, you know. That is what the river does. We just expect it is going to happen. (*Stillwater County Residentialist*)

If you own property along the river, you expect erosion, you expect change....I wouldn't want property along the river, and if I did, I would have to look at it really carefully. It is horribly expensive to try and protect it. To me, it is a detriment to own land along the river. (*Sweet Grass County Residentialist*)

In 1996 we lost quite a little bit [of land]....We lost quite a bit this year....We recently...got it re-surveyed and found out that there isn't, and never has been since we've owned it, as much land as we've been paying taxes on. We've been trying to obtain two titles on this property....Once we get that done we will take it to the county treasurer and see what we can do about that. (*Park County Residentialist*)

The flood of '96 changed my property....The island broke in half and...when it broke the force of that came over and hit that island and doubled back. My neighbor had very poor rip-rap and [the water] found the weak link and just kept coming to my house....I lost 100 feet [of property]...and part of the house. (*Park County Residentialist*)

Our bank changed....The rocks used to go way out in the river. The main force used to be on the other side. We lost at least two feet in one area of bank. That changed the whole flow of the river. Now it comes around the bend and comes at us and then swings out the other way....It changed dramatically with the flood. You don't notice a flow change as much. (*Park County Residentialist*)

Flood Plain Restrictions and the Role of Governmental Agencies: Discrepancies of opinion appear when residentialists talk about development in flood plains and the role of governmental agencies. Clearly, the residentialists from areas with little riverfront development are much more willing to take a laissez-faire attitude toward imposing limits on the activities occurring in flood plains:

They can build where...they want to. But, if they get flooded, that's their problem....If you want to be stupid enough to go down there on a sandbar, don't come crying to me....When they buy these little parcels,...it should be right on their deeds that this property is floodable....If they would have studied it, they wouldn't have built there to start with....Take the liability off me....You'd have

to be a damned fool to build a house on a place like that to start with. (*Richland County Residentialist*)

People know that river [will flood],...that is why we didn't look for a house over there....I grew up seeing that whole area under water. So, I know what that river can do. I wasn't about to buy a house over there. Now, those stores have been built over there, but we wouldn't buy a house over there. (*Dawson County Residentialist*)

I always thought that any damn fool who wants to build on the river bank, sticking his neck out, if he falls in—tough shit-ski. He should know better. It's like those guys in California that build up on a mudslide; they ought to know better. (*Prairie County Residentialist*)

I'm concerned about people moving onto flood zones and expecting other people to pay for it [when they] get flooded. Whether it's the insurance companies, which means all of our insurance premiums go up, or whatever....I've seen more houses move near the river....Some of them are not above the flood plain, and that's their fault. If something happens, I don't think anybody should have to pay for it but them....They want to be close to the river. (*Rosebud County Residentialist*)

There's always gradual change, but in a high water year, it could happen in one year, in one season....The boat ramp was carved out a little bit more this year. So there's more water over there this year in that channel, whereas it was one the other side last year. So, it can happen,...like I said, in a season. And it's always happening gradually. (*Yellowstone County Residentialist*)

People...call it a flood plain for a reason, and if people want to build in the flood plain, then that would tell me that you're going to get flooded. (*Yellowstone County Residentialist*)

If somebody's going to build in the flood plain, they should sign something, 'I'm building in the flood plain. I'm willing to take the risk. I know what the implications are and I don't expect the government or my fellow Montanans or anybody else to bail me out if things go wrong.' (*Yellowstone County Residentialist*)

The last time they did a survey for the flood plain was probably over 20 years ago, and it is something that needs to be done and upgraded....If you look at the flood plain maps they have got, they show us in the flood plain, and that is wrong. We are not in the flood plain. We are too high for a flood plain, but that is the federal government. What are you going to do about it? As far as people building low, I don't think they should be allowed to build in the flood plain. All it does is cause problems for everybody concerned. And for people not in the flood plain, we are being penalized....If there are not enough regulations, or if they have not

been reviewed, when the river changes over the years [the maps are not accurate]....Anybody along this side of the river is required, if you refinance, to have flood insurance, and you can't fight it. If you pay cash, you don't have to have it, but if you finance, [it is required]....I mean, there need to be regulations, and people need the proper insurance, but it needs to be looked at closer and more often. (*Stillwater County Residentialist*)

Personally, I like knowing that the Yellowstone has no dams, and I am all for keeping it that way....Part of me says the river was there, first, and if you are going to live in a place like that, you should know before you do it....Probably, if I was buying a house lot, I wouldn't buy there. I wouldn't build a house there or in the flood plain, if there was a potential for more damage. The river will eventually go a different way. (*Sweet Grass County Residentialist*)

We need to be looking pretty seriously at why we're still allowing homes to be built on the river. And...I'm kind of speaking out of two ends here because I do live on the river, but I do think that since the floods we need to look more seriously at what we are allowing....Each place wants to protect their property....Are we all going to be able to do that and still allow the river to be healthy? (*Park County Residentialist*)

Comments regarding the role of governmental permitting agencies run parallel to the comments regarding needs for restrictions:

The biggest problem here is the diversion dam. They are having a big controversy over the Pallid sturgeon. It is an endangered species...and they are talking about a fish bridge for the sturgeon to be able to go up river....There are some conservationists that would like the dam to go away, but they rely on the dam for irrigation....Intake doesn't allow the fish to move upstream and spawn where they need to....And Pallid sturgeon and sauger get sucked into the canal....They are trying to get big fish screens in front of the canal so the fish can't get into the canal....Another plan is to have a lift station that would fill the canal....If those two plans don't work, they plan on digging this huge canal. For them to do that, they would have to run a canal that was 60 feet deep....Logistically, it is such a mess....It seems the fish ladder is more cost-effective....You'd have to have some pretty impressive infrastructure, ice gates and tree gates to keep the junk out of the canal,...and you would have to have a tremendous amount of dirt and...an easement and...bridges....I just can't see it being very feasible. I look at the map and it seems the river doesn't drop that much. (*Dawson County Residentialist*)

The latest big flap was when Fish, Wildlife and Parks wanted to close a recreation area near town—that really upset a bunch of people. Also, the policies [for] out-of-state hunters and their permits have been quite detrimental to Fish, Wildlife and Parks. The consensus around here is that Fish, Wildlife and Parks is looking for more finances,...to build their own little empires....For a while the ratio of out-of-state permits to in-state permits was too high. The proportion of hunting

license fees for in-state versus out-of-state were out of proportion, also. (*Prairie County Residentialist*)

Basically, [flood insurance] means that you're giving your money away to the federal government....It depends on the value of your property, but generally speaking, [it costs] about \$300 a year. You're paying for insurance that really probably you or your children will never regain a penny from because...it doesn't really cover anything but the foundation of a house....It's a big waste of money...because you have to have your homeowner's insurance on top of it, and...the federal government always waits until the end. (*Custer County Residentialist*)

All he wanted to do was rip-rap to save his bridge....At one time, he had 20 guys standing down there on his bridge, discussing what he should do. Bridge finally washes out and down in the river it goes. The next day, to save the road, they are hauling big boulders, dumping them in...and, of course, in the spring he had to haul his bridge out. That's required....But, there you go. When you're dealing with water, you're dealing with a lot of different people. (*Yellowstone County Residentialist*)

The only problem we had was the reluctance on the Army Corps of Engineers and the DEQ to get [the weirs] done. It took us two years....We probably lost 30 acres and an eagle's nest. To me, that is very disappointing. The lack of vision on the part of people that think the river has to be natural and nothing else works....The length of time and meetings it takes and attitude of, particularly, the DEQ was very difficult. Some of the people in the Corps were very reasonable; some were not that reasonable. The DNRC in town was very good as far as helping us. But their hands are pretty-well tied. They wait for all of the bigger agencies to deal with it. I think they make it so difficult that people just don't want to do it right, frankly. (*Yellowstone County Residentialist*)

All through Montana history, you could do what you wanted. But now you have to have a permit for everything. So that's changed. (*Stillwater County Residentialist*)

Life isn't fair. You've got to do the best you can with the situation. It doesn't matter what we do, or where we're at, we can't choose our neighbors. I think you have to try to make the best of the situation,...[the] best for all. You're never going to please everybody, no matter how you do it. (*Stillwater County Residentialist*)

They just don't want [zoning]. I was raised on a ranch and I lived in town for awhile and the townspeople gave up the right to zoning. They just exchanged one right for another. I wouldn't live in town without zoning....When there isn't any zoning, they can't tell you what to do, but when you have zoning you have the

right to stop a big farm next to you, for example. You give up one right and acquire another one. (*Park County Residentialist*)

Private property rights are always an issue along the river. They often are trampled on by regulation and then those regulations cost the private property owners along the river money....There is always a balance and to find that balance and for everyone to be responsible along the river....I think that's done through education not through regulation. (*Park County Residentialist*)

Rip-rap as an Appropriate Method for Protecting Property: Residentialists are generally aware that properties can be protected by using rip-rap, but many recognize that rip-rap can have negative consequences. In the upstream communities, where flood damages were great and where one county convened a task force, the calls for bank stabilization are most tempered by the awareness that protection of one's private property is not the only consideration:

That's another problem: you rip-rap on one side, and you're shoving that water back over on another guy. He's going to be a squawking....It wouldn't do...[anything] to the rivers at all, but it would take away from the natural beauty of it. I mean, you drive down the river and it is all rocks, which aren't supposed to be there, you know. (*Richland County Residentialist*)

Rip-rap works pretty-well...I think the river is going to do what it is going to do....I could rip-rap this, and I have always heard that if you do that, it will take it someplace else. (*Dawson County Residentialist*)

There isn't too much to do about [erosion]....They piled debris from the old high school right here on the riverbank and that is what protected our riverbank. It stays pretty permanent, and when the water comes down, it keeps it out. (*Dawson County Residentialist*)

I think they get concerned [about erosion] and do stuff for it. I know some people put in rip-rap....If it is going to control the soil, then good. I might be speaking out of turn, but that is the way I look at it. (*Prairie County Residentialist*)

We should have laws that limit erosion control along the banks...and it's going to have to be enforced so that everybody's treated right....It would have to be [regulated by the federal government] to...[encompass] the whole river. (*Rosebud County Residentialist*)

The '97 flood took out the rip-rap and 500 yards of dike. I lost about seven or eight acres of irrigated ground. Ice jams are another one. It can go from a nice mild river and within about 30 minutes it will be running over the banks....When it flooded in '97 it deposited gravel over 18 acres of irrigated ground four feet thick of just gravel....We had to get the trees and debris off....[It took] two weeks....We used a tractor, a loader, a Cat, and a dozer. There were a lot of real

sandy piles....We had...to spread it out or push it into a hole. It was so fluffy it was hard to get around with it....I suppose that took a week or ten days. Then we went in with a disk and disked it and chisel plowed and took our own level and leveled the land. We spent a couple of weeks at that. We spent most of the summer getting it so we could plant it the next spring....You don't realize all of the things that happen when you lose that much of a crop....I suppose [it took] ten years to [pay off the expenses]....Of course we lost seven to eight acres of ground that is totally gone. At today's prices, that is worth between \$15,000 and \$20,000. You still own it, and owe on it, and still pay taxes, but it is in the middle of the river. (*Treasure County Residentialist*)

I've been thinking about getting some huge landscape rocks and putting them down there along the bank, just on top of the bank. I understand that concrete blocks and concrete rip-rap are out now because of the lime and all of that other stuff. So you got to come up with some kind of alternative. (*Yellowstone County Residentialist*)

Rip-rap in key locations in the river is really important for landowners. If they're not able to rip-rap, they're going to lose land. (*Yellowstone County Residentialist*)

I don't think [rip-rap] would be effective—not on a curve like that, because I think eventually it just...gets behind the rip-rap, [and] you end up doing it again. So I don't believe rip-rap is the answer. (*Yellowstone County Residentialist*)

We put weirs in....[They were] incredibly successful....If it is done right, it works very, very well. We spend a lot of money and time and energy enhancing wildlife on a property like this that we are not compensated for. We do it because we like to....I spent hundreds of thousands of dollars doing the project we did on the river, doing the weirs the way we did it, engineered right. (*Yellowstone County Residentialist*)

You can attempt to control it, but when you have a flood, like in '96 and '97....We hauled rocks that were huge, and [now] they are sitting out in the middle of the river, and the ground that they protected is gone. You can control it somewhat. (*Sweet Grass County Residentialist*)

When we're talking about the Yellowstone, we're not talking your normal Montana river. I mean,...there's a lot of power in this bad boy....It will do what it wants. So...to keep it from eating stuff up, you've got to get pretty tough with it. (*Sweet Grass County Residentialist*)

That guy spent tens of thousands of dollars rip-rapping it to protect it. Since the flood, he has done more rip-rapping. (*Sweet Grass County Residentialist*)

Rip-rapping is the cheapest form of erosion control....Some people will use steel plates, and pound in bridge pilings, and make a wall if they are trying to protect a house. Concrete walls are very expensive. (*Sweet Grass County Residentialist*)

I think you have to have rocks. If you do it right with vegetation, I think you could do a pretty fair job. I could show you on our place...one place where it has worked very well with vegetative growth, but [it doesn't work] in every place....I think vegetation with rock would be a great way to go, so long as it's done in a way that you're not going to cause damage downstream from you. (*Park County Residentialist*)

Don't be too hard on the people that live on the river. I don't have the money to make big changes....I had a bunch of cottonwoods growing and the beavers came and ate every one of them. There went my stabilizing....[The beavers] are really destructive. I am trying to keep this place,...[even though] the moose come and they eat everything they see and...I am not going anywhere. I am going to stay here. (*Park County Residentialist*)

[Rip-rap] can divert water. It can shift the problems up or down....The reason that I probably might not do the rip-rap is I'd lose ten years of vegetation that's out there since the last flood and the vegetation is as good or better than hard rip-rap...[and] once I talked to some people who explained that to me, I don't really want to tear it up to put some rock in...but [the information] didn't come from any of the [government agencies.] (*Park County Residentialist*)

Specific Concerns Among Residentialists

The concerns identified here are, more or less, specific to this interest group. In most cases, the issues or topics are linked directly to living near the river.

Private Privileges and Public Rights: Residentialists are likely to explain that they feel very fortunate to live near the river. They cherish their locales. They desire to protect their sense of privacy, their rights concerning who is on their property, and many are distressed that recreationalists violate the "high water" designation. They do not argue against the public's right to be on the river, but only a few speak with passion when discussing the need to maintain public access to the river:

We lived in a small house in town, then we decided we would like a place in the country....I am two-tenths of a mile from the river. I am two miles from town and my closest neighbor is a quarter-mile [away]....It is somewhat isolated, but you are still close to town. (*Richland County Residentialist*)

I like wildlife and scenery....I can sit on this deck, right here, and I can't see a neighbor. So, if I blindfolded someone and put them on the back deck, they might as well be out in the middle of wherever. You can't see anybody. (*Dawson County Residentialist*)

I don't see conflict between the different groups. Like I said, a lot of the landowners are very cooperative about access. The river can be used sometimes for hunting access to the state lands. They'll get in at a boat dock and go up to...state land. [There are] not too many concerns there, as long as the hunters stay where they're supposed to stay....I think the...recreationists have to be aware of agriculture and be respectful...and I think for the most part that is recognized. Maybe the good access helps too. The roads are all graveled and nice. You can access in any kind of weather. That probably helps. (*Rosebud County Residentialist*)

There aren't enough people here yet [for conflict to exist.] I would imagine if we start getting a lot of people, we will get that. (*Treasure County Residentialist*)

Access—that is complicated....I would like to see just two accesses but...it would be better for the public to have one more....There have been times, especially during deer season, [when] they keep hounding me...to put a boat in. So far, I haven't let anybody use it except my own family. There can be hard feelings over it. It is private property so they should understand that....I am not real comfortable with [them going] right by my house....You are going to have people throwing stuff out and littering. You think they won't, but they will. (*Treasure County Residentialist*)

Nine out of ten of those people that...come from a public access are going to trespass....There's four-wheelers all the time that we are constantly reminding them are not to be up on motorized vehicles, even within the high water marks. 'Oh, gee, we didn't see the signs.' 'Oh, really, gee, we are sorry' [they say] after they have been down there tearing up the riverbank. (*Yellowstone County Residentialist*)

There's always the high water mark which I really like. As long as you can get on legally, you are legal. I don't believe in the circle the wagon thing neither, buying big blocks and just shut it down. (*Yellowstone County Residentialist*)

Quite honestly, if they're just pulling off for a few minutes to take a break, I don't really care. (*Yellowstone County Residentialist*)

We need more access so people can get on to fish. People just don't trust people anymore, and we can't blame them....Unless you know somebody, you can't get on...[so] they fish the bridge down here...[on] both sides, and they fish this corner up here, and they'll walk down the railroad tracks and fish that side, and there's a rancher over here that lets people that he knows on there to fish....[But] it's too close; you've got to get farther away to fish. To catch these here, you've got to go a long ways. (*Yellowstone County Residentialist*)

We realize that if someone is on the river they can get off and get out as long, as they stay within the high water mark....They can come along, and stop and fish

along the bank, as long as it is at, or below, the high water mark. That is the law....[But,] as I understand it, there are some rich people that are trying to take it away. (*Sweet Grass County Residentialist*)

I can see both sides: the people wanting on the river, and the private landowners next to [the river] that don't want people going through their land to get on the river. I like to use the river, but I also understand that people don't want you driving through their bull pasture, and leaving the gates open, and driving all over their pasture, and killing the grass and stuff. The best I can see is public access in spots along the river, so you can get down there, and then you can use it. You can use it next to a private land, as long as you get on it legally, which I agree with. Some people think that you shouldn't be able to use that river next to their land, but I don't agree with that. I think it's a public river. But, as far as any change, I don't know what could be done to make it better. I know there are problems. (*Sweet Grass County Residentialist*)

This subdivision is unique in that there is a bridle path that follows the river for use by the owners in the subdivision. Anytime you have an easement like that, it is somewhat troublesome because there is no incorporated town out here. But if the towns grew enough, they could make a permanent easement, and everyone could use it. That is what bothers me....That bridle path was meant as a bridle path, and they shouldn't use it as access to the river. It may sound selfish, but I am paying taxes on it, and they don't. My liability covers only me, and if they got hurt, they could sue me. They wouldn't win, but they could still take me to court. That bothers me....A guy bought a bunch of the land, and is going to put in 100 houses [behind me, away from the river]. That is a huge impact. If those people think they are going to use the bridle path, I will have a problem with that. It was designed for this portion [of the subdivision], not the whole. So, the enforcement problem may be a real problem. (*Stillwater County Residentialist*)

We're not all rich people that can buy ranches and have our own private...hunting and fishing....I think we have the highest per capita participants in hunting and fishing that live in Montana compared to other states and part of the reason is...the opportunities...we have. It's still good for the average person....They can have as good of access to hunting and fishing as the rich people do and that's real important to keep it that way. (*Park County Residentialist*)

I'd like to see public access maintained. I'm a real believer in the stream access law....Let's use the resources. I'd like to see sensible use of it. I don't want to see wildlife adversely affected by or during a drought year. I want to see enough water maintained to keep the fisheries stable and in good condition, if that's possible. (*Park County Residentialist*)

NIMLYs—Not I My Lifetime/Years: Even though many residentialists have a great deal of respect for the power of the river, a number of residentialists view the river as benign and see no real threat to their properties. When asked if they worry that they

might be flooded or that the river might erode the bank away, some residentialists agree that over time such possibilities were real, but they would also explain that they did not see such threats as immediate. Such residentialists are referred to, here, as NIMLYs, “Not In My Lifetime” and “Not During the Years of My Life” are common ways of explaining why they do not worry. They seem fairly certain no harm will come to them. In fairness, some are probably correct, and the river’s processes will not harm their properties in the next few decades. However, some people explain themselves rather clearly as Former NIMLYs. They experienced problems they never anticipated. Here, then, are comments reflecting NIMLY attitudes and former-NIMLY attitudes:

I am almost positive that we are not in the flood area. Although, one spring it did almost come over the bank....It was that far from...running over the bank. It will probably happen again one of these years. (*Dawson County Residentialist*)

We haven’t had any [flooding]. This house was built later than most of the houses in the neighborhood, up on the ground, so a flood would still do damage here, maybe the basement....It would have to be a bad flood to damage this house....[It] doesn’t really concern us now. There would be plenty of warning for it now....[You] insure your house and leave when they tell you it’s going to flood....It’s not something I am going to worry about living down here. It’s the chance you take. (*Custer County Residentialist*)

This house used to sit down there where the pile of dirt is. I had to move it.... High water came and washed the bank away....That was the 200-year high. There used to be an island down there about 100 yards and the 200-year high took it out. [The dike] was all rip-rapped and I thought I would never have to touch that again in my lifetime. In May [the river] took it all out. Some of it has been rocked since the early 1970s. (*Treasure County Residentialist*)

The next year we had a 500-year high and it went right by me because the island wasn’t blocking me....[That second year it washed away 100 feet of bank and] the river was running right by the whole south foundation....It cost probably upwards of \$40,000 [to move the house]. (*Yellowstone County Residentialist*)

As far as flooding and such? No, we don’t [worry]. The town’s going to flood before we would. We’re higher than that, so we don’t have a problem with that. I think if we’re going to flood, I’d better call Noah in because, you know, it’s going to get pretty high. (*Stillwater County Residentialist*)

I don’t know if during our time down here we will [see change]....But there again, it depends on the number of floods. That is going to have the biggest impact on it every time. If that happens there is something different every time....But I don’t think we will see a major change. I don’t expect a new channel to be going across the hills or something. If it does that, we will be out of here! We will be building a big boat with a lot of animals on it. And one thing down here where the river runs, there is that big hillside there, so if it is going to change,

it isn't going to impact this way....It was a big flood we had in 1996, 1997, and we weren't living here prior to that, but we floated it a lot, and it didn't make huge changes. That was a good-sized flood. (*Sweet Grass County Residentialist*)

1996 and 1997 were historical record flood years and...conversations have really been stark because of those two major floods....I think people got scared about protecting their properties and some properties were lost. And so with the protection of property and living on the river, there's controversy. And I think before the [floods, the] controversy probably wasn't as strong....I think we can be good stewards to the water and the river ways but also [we can] protect our homes....Somehow we have to come up with a balance instead of just saying, 'Oh, you can't do this, and you can't do that.' Somehow we have to work together to come up with what is the best thing for the river and [the people]. (*Park County Residentialist*)

The Impacts of Development: When asked about the future, residentialists often discuss how further residential development will impact their communities. In communities where little development is occurring there are few concerns, but in communities where development has been relatively intensive, residentialists are aware of problems, even when they recognize the irony of their concerns:

Instead of a lot of the river frontage being locally-owned or farmer-owned, there is a big chunk that is being bought by out-of-staters....We are not that concerned with the river's impact on people as much as we are concerned with the people's impact on the river. If they don't take care of it, it will continue to get worse. We have had a lot of people come by here, from all over the place. I had a guy from Minnesota stop one day and want to hunt turkeys in the yard. (*Richland County Residentialist*)

Where we are, right here, sure, there might be some more development....More development might be nice. We need to stimulate our economy. (*Dawson County Residentialist*)

Out-of-state people are driving up prices and changing the politics...the Ted Turners tend to have a political agenda. And, in some instances,...[they are] successful. (*Dawson County Residentialist*)

I see it growing because of the energy in the area. There are companies coming in that deal with energy. If it grows, it's going to be because of energy. It's basically right now an agriculture town and hasn't grown a lot at all....There's always the possibility of the Tongue River railroad. They talk about power plants....Energy is becoming more and more important....At some point, it's going to come in and we're going to see the town grow. (*Custer County Residentialist*)

The whole area is getting less populated. Our school is truly downsizing....There are no jobs that pay well in this area, unless you're lucky [with] the

railroads....There's agriculture jobs...but they don't pay well: \$40 or \$50 a day....When you start adding it up at the end of the week, it truly isn't [much]....Montana does not take care of its people....They cry that they don't get any tourists, but they don't do anything to welcome them to the state. They have lousy rest areas and...they shut down in the winter time....They don't do anything to promote tourism [and] then they cry that everybody else gets the tourists. I'm sorry, I'm spouting off. Montana is a beautiful state. I love Montana and there are nature's wonders all over the place, but they don't do anything to promote them, and they don't do anything to take care of them. (*Rosebud County Residentialist*)

I would like to see it stay in agriculture. I would hate to see a bunch of houses here. (*Treasure County Residentialist*)

We're losing more farm ground every year for people to build on....It's going to grow. If they get a sewer system in here, it'll grow. It's grown a lot now, all these houses down here are new. There's a block over here, there's three new houses on it. (*Yellowstone County Residentialist*)

When you have more people, you need more water. How do you share that with the agriculture? That's going to be one of the big questions....What happens to agriculture? I know in Billings a lot of that Ag land is being bought up and is being subdivided. Is the amount [of water] they use less or more in those subdivisions versus what farming would use? What is the trade off there?...I think that would be as big a concern as any. (*Stillwater County Residentialist*)

HUSBAND: Another thing that is grinding people bad [is the] rich people buying up this land along the river, and shutting it off to hunting and fishing. That is a big issue. WIFE: As a subdivision, we don't allow access to the river. HUSBAND: If somebody asks, we would let them down there. WIFE: Not just someone off the street. HUSBAND: No, [but we would] if we know them. It isn't a public access; it is private land. We wouldn't deny access. WIFE: We do to outsiders. If someone comes from Billings, and wants to fish, we would tell them no. HUSBAND: That is our policy to keep it kind of private. The Fish and Game need to have all the accesses they can get. They need to maintain them, and clean them. There are a lot of rich people buying land and shutting it off. Public access is important. (*Sweet Grass County Residentialist*)

The development is just unreal....At night,...I used to drive around and see a dozen lights in the old days, and now there are just hundreds of them, thousands of them, literally. So a lot of the ranches have been chopped up. But it's dollars....They can make more selling it for a house site than they could making hay. (*Park County Residentialist*)

[My kids] will be lucky to afford to live here, I'm afraid. We're lucky we bought our property when we did because we couldn't afford it today....We just got a new law passed by Congress on conservation easements that's a lot more user-

friendly. Before, the only people that could use those conservation easements were multi-millionaires, basically. And this new one, in fact I was reading about it this morning, you can defer this for, like, 16 years, where before you had to take your tax deductions in six years. So there are some positives there, although you mention conservation easements to some people and they think they are wicked. I think it will help me for estate planning to be able to pass our place on to the kids easier. (*Park County Residentialist*)

Implications of Residentialists' Perspectives

The perspectives and concerns voiced by residentialists suggest that very particular issues must be accounted for both in the near future and in on-going resource management strategies. For instance, residentialists clearly pay close attention to the resources of the river. They feel deeply connected to many forms of wildlife and to the quality of the water. Having chosen to live near the river, they are studious observers of what is happening to the river and the environment, and many of them keep detailed journals of their observation. Importantly, even though many of them are enamored of their locales, only a few speak in detail of riparian functions. For example, many residentialists view the cottonwood trees as beautiful and as important bird habitats, and they often recognize that the cottonwood stands are quite old. Yet, only a few seem to ponder why there are no young cottonwood trees, and fewer still explain that flood regimes are important to the regeneration of cottonwoods. Another example is to consider that some residentialists are actively working to eradicate noxious weeds on their properties while others never mention the issue.

The implication of these examples is that residentialists can be some of the strongest allies when looking for property owners who will voluntarily adopt practices that promote the overall health of the river and the riparian areas. Unfortunately, it will take a concerted, focused and sustained effort. Residentialists do not appear to have a sense of oneness with fellow residential river-dwellers. They are, perhaps, the least likely to band together as a group. Yet, their deeply-held personal attachments to the places they live make them obvious candidates for becoming good stewards of the river's resources and good protectors of the public's interests.

In a different way, however, conversations with residentialists imply that a somewhat taken-for-granted aspect of the public's use of the river will eventually, if not soon, disappear. Namely, as residentialists occupy more of the riverbank, and as they become more concerned with protecting their personal privacies, there will be fewer informal paths to the river. It is also implied that violators of the "high water" designations will not only encounter disgruntled property owners, but that they will encounter property owners willing to engage legal remedies and recourses for trespass. Groups with recreational interests will want to promote respectful observance of property rights. It seems entirely possible that a time will come when formal public access sites will be the only means of getting to the river if one is simply a member of the general public.

While alarms need not sound at this time, the conversations with residentialists suggest that pressures will grow for new public access sites but property owners will be unwilling to accommodate the demand. The state may be able to remedy the pressures in some cases, but another implication is that organized recreational groups, especially those willing to self-monitor their members, will attempt to privatize access in some areas.

A rather troubling third set of concerns is introduced when considering the difficulties involved in maintaining a free-flowing river while simultaneously protecting personal properties. It is apparent that individuals with structural investments near the river will eventually request permission to protect those investments. Where setbacks are not in place, homes can indeed be built in the flood plain. Current federal regulations make it an expensive proposition, but it is not beyond the financial means of many newcomers to Montana. As well, homes that sit well above flood plain concerns can be jeopardized when the river channels take new courses or return to old ones. A few “bridges to nowhere” attest to such channel movements, as do many stories associated with the floods of 1996 and 1997. It makes sense to avoid building near the river, yet the attraction to do so is strong and it is not difficult to understand why residentialists want to protect their homes once they are built. NIMLYs may be happily oblivious, but they are not necessarily safe.

By implication, then, it is important for fullest breadth of the river to be identified and mapped. Not only do local communities need periodically updated flood plain maps, but they must be assisted in minimizing development projects that will eventually be threatened by the river’s natural changes of course. Arbitrary setbacks, such as 300 feet or 500 feet, are unlikely to garner public support. However, the establishment of informed limits, one’s based on historically verified changes, have a chance of generating support. Even though current owners will continue to ask for permits, or to take matters into their own hands, it will be easier to maintain the free-flowing nature of the Yellowstone River if further developments are kept well out of the path of the river.

As demonstrated in the above, residentialists have rather wildly dissimilar understandings of the physical processes of the river, the riparian functions and reasons permitting complications. It certainly should not be expected that the general public understands the river very well because even the experts admit that there is a lot about the river that is not predictable. An attitude of conservative flexibility should be fostered so that the public and the riverfront property owners can understand that local governments do the best that they can, given the available information. Also, because new information is always coming into view, managers and local governments will necessarily change the rules at times. Every influx of new people, every new generation of adults, and every group of individuals that acquires the means to own a “slice of heaven” will need to be educated and assisted in understanding the river, the management strategies, and the constraints of local governments.

Native American: River-Length Overview

Interviews were conducted with seven individuals representing Native American interests, including members of the Crow and the Northern Cheyenne tribes. Participants were recruited from referrals provided by various project supporters and by Dr. Jeff Sanders, Associate Professor of Native American Studies, Montana State University-Billings.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|---|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Native American: Analysis Table

River-Length Concerns Among Native Americans

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Native American: Summary

Introduction

A review of the Native American interview data for this river-length summary suggests that people share four common sensibilities when discussing the Yellowstone River. First, the Yellowstone River is known to both the Crow and Northern Cheyenne as the Elk River. The namesake refers to the abundance of wildlife along the river valley, and the Elk River occupies an important role in the tribal histories of the Crow and Northern Cheyenne. Second, the tributaries of the Yellowstone River, the plants, the wildlife, the human cultural practices, and all other living beings are interrelated. Life-forms are connected through water. Third, water is considered a spiritually-significant and deeply important element within the Crow and Northern Cheyenne cultures. Fourth, the recent years of drought are troubling.

Despite these commonalities, Native Americans express dissimilar opinions and beliefs. These diversities are primarily based on their unique situations and specific geographic locations. The Northern Cheyenne are concerned about the water pollution caused by the current Tongue River coalbed methane wastewater operations and the future development of additional extraction sites. They are also concerned about the restoration of native fish populations in the Tongue River and its tributaries in relation to diversion dams as barriers to spawning sites. Finally, members of the Northern Cheyenne Tribe discuss how noxious weeds and their various forms of dissemination threaten the native plants that have cultural and medicinal significance. Crow participants spoke of the rapid development and its effects on the destruction of fertile farm ground in the river valley. They felt more thoughtful steps towards planning to preserve fertile farmland should be undertaken.

There are three sets of concerns specific to Native Americans. They are concerned about pollution in the Yellowstone tributaries, especially as those problems are a function of faulty wastewater treatment facilities on the reservations. They are also concerned about the cultural separations occurring as each generation seems to be not only physically removed from the river, but spiritually removed as well. In some cases, these detachments from the Yellowstone River have caused tribes to relocate cultural practices onto the river's tributaries. The third set of concerns are articulated as vulnerabilities due to economic hardships and political problems that allow for unfortunate natural resource decisions.

Finally, there are four evident implications derived from these discussions. The first is that the Yellowstone River should be managed according to holistic principles that include the entity of the basin and its constituencies. Second, tribal communities should be given as much support as possible when dealing with problems that ultimately effect

downstream quality and quantity. Third, oral accounts of the river should be more fully gathered and incorporated into the official records of the river. And fourth, there are many mutually-beneficial opportunities for partnerships between the interests of the Native Americans, other interest groups, and managers.

The quotes included in this summary are for illustrative purposes. They are also found in the detailed analysis that follows.

Common Concerns Among Native Americans

The following concerns are common among Native Americans interviewed, regardless of where one meets the individual and regardless of which tribe the person is a member. In the past, the river and its environs provided abundant game for the tribes and thus it has great historical significance in the histories of each tribe. Moreover, river waters were, and continue to be, viewed as a life-force that links lives together and that must be respected as sacred.

The Elk River: The river known to Crow and Cheyenne as the Elk River is known to others as the Yellowstone River. The Elk River occupies an important role in the tribal histories of the Crow and Northern Cheyenne:

It was named the Elk River because there was quite an abundance of elk along the river, drinking, using it as a life-giving source. They had to drink water. From what I understand there used to be hordes of elk along the river. We used the hide. We used the teeth and we ate the meat... Wedding robes were made from elk hide. Wedding robes are beaded strip blankets and porcupine quill work was put on there or later after trade came to this area beaded medallions looked beautiful and they were given to brides of Crow men. The hides were valuable because of the size. Of course, we used the teeth too. Two teeth from each elk were put on the elk tooth dress. If you had a dress with a lot of teeth on it that meant you were from a wealthy family. That your husband, your son, or your brother was a good hunter. That elk teeth were symbolic of wealth and the ability to hunt. (*Crow*)

The Cheyenne hunted buffalo all through that area. They had a lot of contact with the Yellowstone River. They allied with the Sioux and evolved into the confluence of the Yellowstone and Missouri. There was a lot of game. (*Northern Cheyenne*)

Water Integrates Life—It is Not Simply a Part of Life: The main river and the tributaries link all life forms together:

The river is *in* the willows that form the lodge that comes from the riverside. [A medicine man] said that the wood too comes from the riverside that we use for the fire. (*Crow*)

It is a belief system. It is not something you can look at scientifically. It is so important that it is part of our religious belief. You can't separate it [water] into farming, etcetera; it goes way beyond. You can't separate the importance of water in our belief system. It is who we are and you can't separate that. The western world is very segmented...[but from] the holistic view...you can't have a coherent system broken into parts. (*Northern Cheyenne*)

I enjoy looking at the river, because water is life. That's what we've been taught. And it's precious, the water is. And anything that is growing along the river because of the water, the life that the water gives, you know, I always think about those things,...because I'm an American Indian and because I appreciate those kind of things. I've been taught by my mother to think about those things and, of course, you know in these modern times when everybody, red white blue, anybody, has become aware of so many of these kinds of things that are important to us as human beings, you know, no matter what race we are, what culture we come from, water should be important. (*Crow*)

It is a living entity for the Cheyenne people. Where does it come from? Springs are also sacred to the Cheyenne. There are stories that say you can't be around springs at night. There is an animal that protects it and if you see it you will go haywire or move on...take a journey because of this animal. Why does this animal have this power? You have to go back further and say why does it protect the springs? It also lives along the creeks. (*Northern Cheyenne*)

Water is Sacred: Water holds a special place within the Crow and Northern Cheyenne cultures as a sacred life-force:

The river is a giver of life but it can take your life away also. There is this sacredness that we attach to water and the animals. "Fish" in Cheyenne also means "turtle." Turtle is a sacred symbol to the Cheyenne. It is symbolic of a male also. These things are so interconnected, that when we talk about water, we have to look at everything that deals with water because water is everything. It is in the form of fish, it is in the form of humans, it is in the form of animals. When we talk about ceremonies it is all in reference to life. (*Northern Cheyenne*)

When the elders told me that story about how God looked down and wanted to formalize the Crow tribe with formal relationships, I always think about the Yellowstone River, that's what he saw. (*Crow*)

A medicine man took us in there, he was an elder. Before he took us in there he explained the importance of the water. And back then, when I was young, maybe the water wasn't so polluted because we did jump in. He took a dipper of the water, and he prayed over it. He said, 'This water is life to us human beings, and to the natural resources that grow around here, and to the animals who depend on this water.' He said, 'Don't ever be cruel to this water. No matter what form, whether it comes out of your faucet or if it is free running like this.' (*Crow*)

Culturally speaking, water is everything. (*Northern Cheyenne*)

Yes, it's sacred. Lots of things are sacred to American Indian people; water is especially so, because we use it in so many things, you know. Not only do we drink it to nourish our bodies, we pray before we drink it, because we know what it does for the body. We also use it in our sweat bath, we use it in the Sun Dance, we use it in the Tobacco Society, which is a religious organization in the Crow Tribe. We use it in almost everything that is connected to our beliefs in nature and in God. It connects us with God. And so it's a very sacred commodity. We just cannot live without it and we know it. So, it's not taken lightly, water, it's not taken lightly. (*Crow*)

Drought is Troubling: With recent droughts, the future of the quantity of water in is of special concern:

I don't know what has happened there. Lame Deer Creek is basically dry. I remember in the winter time having to chop holes in the ice to get water. (*Northern Cheyenne*)

The drought is the biggest problem, even in Billings in the Blue Creek area. (*Crow*)

Diversities of Opinions Among Native Americans

Members of both tribes express concerns about the effects of historic and contemporary development on the health of the river. There are a number of topics that generate detailed discussions; however, some topics seem to be more particular to the Northern Cheyenne while other topics are seemingly more immediate to the concerns of the Crow.

Concerns Highlighted by the Northern Cheyenne: Issues regarding coalbed methane development and plant species are discussed extensively among members of the Northern Cheyenne tribe.

Water is a by-product of the extractive processes used to gather methane from underground coal seams. The quality and quantity of the extracted water varies greatly depending on the particular well, but typically it is discharged into the local environment. Thus, as the coalbed methane fields in northern Wyoming are further and further developed, the Northern Cheyenne have become more and more concerned. Not only do many of the methane fields in northern Wyoming ultimately drain such waters into tributaries such as the Tongue River, but there are efforts to develop similar fields throughout southeastern Montana. Concerns over the impacts on water quality are commonly voiced:

You hear about the coalbed methane water. It has already affected the health. It is probably high in saline and that is number one polluter right now of both the Rosebud and the Yellowstone. (*Northern Cheyenne*)

We were in court with Fidelity. And the judge finally made a ruling that Fidelity could go ahead and drill and sink some more CBM wells and there was a certain percentage that I can't remember that they could dump untreated into the Tongue River. That is on top of what Wyoming is dumping into the river. There is pollution from the Montana CBM wells. (*Northern Cheyenne*)

The Northern Cheyenne also express a great deal of concern regarding the restoration of native fish populations. They view irrigation projects, in particular diversion dams, as detrimental to restoration efforts:

You can look at the native fish that used to be coming up from the Yellowstone, the sturgeons and there are other species. [We need to] try and increase the water flow....I think that is a benefit to the tribe as well as others. (*Northern Cheyenne*)

Instead of using everything, leave some for the fish. (*Northern Cheyenne*)

There was a study done before they had these diversion dams. There was no fish passage. Now we are working on installing fish passages on these diversion dams so we can get back our native fish. That is what we are working on. They found...a sturgeon way up close to the border that migrated way up there. They want to see more spawning the area. More native that comes from Yellowstone that comes up to spawn. That is what we are working on. (*Northern Cheyenne*)

For members of the Northern Cheyenne Tribe, noxious weeds and their various forms of dissemination threaten the native plants. As invasive plants, these weeds often overtake the plants with cultural and medicinal significance:

The Rosebud and the Tongue are all kind of deep in the noxious weeds...the salt cedar. (*Northern Cheyenne*)

Also vehicles...because we don't have ordinances that say you have to stay on this road otherwise your vehicle can be a carrier of noxious weeds. A friend always comes out to the place and picks different herbs and medicines. He said you have a virtual pharmacy here. There is about 35 different herbs that they use. We try not to drive over it. He comes out and we give him permission to pick those. (*Northern Cheyenne*)

We have noticed a real change in the cottonwoods. They have almost been non-existent, more so than other species of trees in other areas. That means we don't have a good riparian area and that might be another cause of erosion. Not only erosion but the introduction of other species of plants like noxious weeds [is a problem]. The weeds, are opportunists and that is an area where they can survive. (*Northern Cheyenne*)

Introduction of new plants is pretty substantial because when you import hay from other counties you run the risk of introducing new species....You are seeding noxious weeds when you feed hay every winter. (*Northern Cheyenne*)

Concerns Highlighted by the Crow: Crow participants spoke of the rapid residential development and the loss of fertile farm ground in the river valley. They felt better steps towards planning could be made:

If I had anything to say about it at all, there would be no subdivisions in the Yellowstone Valley. I would really try to get people to move out of the valley and then rip up the blacktop and concrete that we have down in the valley. Because one of these days we are going to go to the fridge and we are going to say, “Wow, there is nothing in it because we have blacktopped every acre of the finest, fertile land in the world. Yellowstone Valley is a great producer. (*Crow*)

Why can’t we go up on the ridges up out of the valley and save the valley for farming? It is really kind of ridiculous what is going on. I moved up to Billings almost eight years ago, and west Billings has moved a mile up river; probably three or four miles up river and all the way across the Yellowstone Valley and took up two, maybe three thousand acres of the finest, fertile land in this nation. It is fertile because of the Yellowstone River and we could irrigate it. (*Crow*)

The Yellowstone has always flooded. When the Indian people were here, if it looked like the water was getting high they just moved out. They never fought nature, they lived with nature. Now today, we fight nature; by rip-rapping the rivers as we do, by trying to hold the course, trying to keep it from washing away land. We are constantly in a battle with nature and I think nature is pretty unbeatable when it makes up its mind. (*Crow*)

Nature can’t clean [the valley] and sweep it anymore. And nature would if we would just leave it alone. And the thing of it is, we keep rip-rapping it and the banks are getting deeper and further down because of the rip-rapping. It is not good. (*Crow*)

The rip-rapping and the fertilizing and everything that is going on in the land right now are affecting the river because nature cannot cleanse it. Nature cannot cleanse the valley. (*Crow*)

Specific Concerns Among Native Americans

The concerns identified here are, more or less, specific to this interest group. In most cases the issues are linked directly to the immediate and/or vested interests of these individuals as Native Americans.

Tributaries Suffer Pollution: Tribal participants expressed concerns regarding pollution events in their home areas:

It's become so polluted on the reservation now; there are a lot of concerned individuals. They can't even use it in sweat baths anymore. They used to come out of the sweat bath and jump in the river... They would go in the sweat even in the winter time and jump in the water. Now a-days there is a little hesitancy. They will bring the water from maybe their faucet. They'll bring it in great big buckets and they'll use that. They rarely jump into the river anymore because of it's pollution on the Big Horn River or the Little Horn River. So, that's the kind of concerns that American Indian people have. (*Crow*)

The real contamination is our sewers down there. Holding ponds and those things are overflowing into Lame Deer Creek. You can see where it has killed all the vegetation. It is starting to smell. I don't know how far down it goes. I know they walk along there. There is a spring down there and it has been impacted by the overflow. Nobody seems to do anything about it. That is a tributary into the Rosebud. And it contributes to the Yellowstone. (*Northern Cheyenne*)

Separation from the River and Nature: Due to Native Americans having been placed on reservation lands, tribal practices that were once associated with the Yellowstone River are threatened. Some practices have long since been relocated to tributaries, but others are apparently at risk due to the modernizations in tribal members immediate lives:

Not very many of my people listen any more to nature and it's kind of sad. I blame it on economics. Life is really, really hard anymore for Indian people... We're competing with the modern world too. (*Crow*)

The traditional use is still with us today. They don't practice it as much as they used to because we are losing our elders. (*Northern Cheyenne*)

Geographically speaking the limited access to the Yellowstone is an issue. The Yellowstone River is an important cultural location. As time goes on, memories start to fade and physically the usage of the Yellowstone is almost nonexistent today just because we don't have access to that river anymore. There are certain times that we can have access to it like any other citizen. That is recreation. (*Northern Cheyenne*)

I think we still own some of the islands on the Yellowstone River, I think. We're supposed to own the mid channel of the Yellowstone, the southern end which is still supposed to belong to the Crow Tribe. (*Crow*)

Some of the things that we do here...we still do them on the Tongue or the Bighorn or the Rosebud. Those things were part of the cultural practice along the Yellowstone. (*Northern Cheyenne*)

Politics and Economics Impact Natural Resource Decisions: Native American participants express concerns that the political and economic pressures faced by tribal members are sometimes at odds with long-term objectives:

Growing up, there weren't that many cars here. You could go into the hills and run into deer. They propagate real quick. Then cars were introduced and then pickups and then four wheel drives and spotlights. People hunted and started killing the deer population. They never implemented a season or some kind of control. When I became superintendent they passed a spotlight ordinance. In three years time the population came back. (*Northern Cheyenne*)

The EIS [Environmental Impact Statement] for Otter Creek [coal plant] development is kind of a repeat of another court case that the Bureau of Reclamation wouldn't include the impact on the Northern Cheyenne in the study. They went clear to the Supreme Court and it was handed down that the Bureau of Rec. needed to do that. I guess they are not good learners because they did it again. (*Northern Cheyenne*)

The Crow Tribal leaders sold our water rights away. Some of the Crow, we call them the Allottees' Landowners Association, which is the organization I am part of. One of our members wrote a letter to the Department of Interior, in Washington, D.C. and stated that the tribal administration as a whole, as an organization, has no jurisdiction over our land. Tribal allottees are individual land and water owners and they have no right to negotiate on their behalf. So the judge over there in Washington D.C., Lamberth, I believe, he acknowledged that. So the US Justice Dept. stopped that ten million dollars the administration was trying to get for the individual water rights, between here and all the way to the Yellowstone. (*Crow*)

There are people always handing money under the table for tribal council to not let our people develop anything at all. (*Crow*)

Implications of Native Americans' Perspectives

Taken as a group, the perspectives and concerns voiced by Native Americans suggest that very particular issues must be addressed in both near-future and on-going resource management strategies. There are four primary implications for the Native American interest groups, agencies, communities, the Tribal Council, and other interest groups.

More than any other interest group, the Native American communities speak of the river in holistic terms. They speak in terms of not separating the parts from the whole, and they consistently expand conversations to include both the physical tributaries and the broader social communities that share the resources of the basin. The first implication, then, is that management decisions concerning the Yellowstone River are incomplete unless they take into account the entire river basin, including its system of tributaries, its 70,000 square miles of drainages, and its diverse constituencies. Inclusive management schemes

are certain to be difficult to coordinate, especially if the new scheme either implicitly or explicitly brings more people and more perspectives into consideration.

This expanded view suggested leads to a second implication. Namely, it may be necessary to provide assistance to tributary communities as a means of insuring the long term health of the river. For instance, there is an apparent need for improved water quality measures and water treatment facilities on the reservations. Participants explain very specific problems that could ultimately degrade water quality in the main stem of the Yellowstone River. They note accidents, cite irresponsible behaviors by tribal members, and discuss a lack of monitoring as their primary concerns. Other problems are derived from improper, outdated, or failing infrastructures. Also, the Native American participants noted that many people simply do not understand the impacts of their individual activities, nor do they understand that some of the historical practices may be unsafe given the current water quality conditions. Agencies, downstream communities, and other organizations should partner with tribal members to work towards solving these problems and towards helping tribal members better understand the dangers associated with improper wastewater treatment.

A third implication is exposed by considering that many of the cultural and historical resources of the Native American communities are threatened by the inevitable aging and loss of elders. When one considers the brief attention paid by this project to the oral histories of Native Americans in terms of their associations with the river, it is clear that these histories should be more fully gathered and incorporated into official records concerning floods, droughts, ice jams, wildlife, and fisheries, to name a few. Stories about the river and its tributaries are passed down generation to generation among Native Americans and act as a collected history. If these Native stories are treated as simple folklore—or worse, as myths—then the informative power of these histories is lost to managers.

Finally, Native American communities struggle to avoid a variety of vulnerabilities. A recent example involved a “near-miss” regarding the Crow Tribe’s water rights. By the accounts given, tribal leaders had been misled, and if it had not been for the vigilance of a few people, the agriculturalists on the Crow Reservation would have lost their water rights. The potential effects could have caused devastating problems for the reservation and for downstream users. Thus, a final implication, here, is that even though the Native American communities are threatened by numerous vulnerabilities, these threats should be taken into account along with the threats to agricultural, recreational and municipal interests. It is towards everyone’s benefit to identify and support a strong and stable nexus of Native American allies who are dedicated to a healthy watershed. Partnerships that build from mutual interests can serve the entirety of Yellowstone River communities.

Native American: Detailed Analysis

I. Cultural Meaning of the Elk River

A. The “Elk River” at the Center of Living

There is no Yellowstone River. There is the Elk River. (*Crow*)

I heard old folks call it the Moose River or Elk River. The Elk River. Eeyohe River. (*Northern Cheyenne*)

They used to call it the Elk River. Back then, it gave life to them. There were good camping areas with a lot of Cottonwood trees....Even today we still have stories of what took place in those areas; buffalo hunts, battles, ceremonies around the Yellowstone. The stories are important to carry on about the Yellowstone. I think that is one of the most important things for the people here. They talk about how they would cross it and how they would watch the flows and how it fluctuated. There were some individuals who kind of liked science. They studied water, however it moved and the flood plains. (*Crow*)

You take the contribution of the tributaries that sustain these rivers. Everybody here knows that the river is life. It is a living entity for the Cheyenne people. (*Northern Cheyenne*)

The river, the land area was at one time Crow Country and we love this place because it provided us with a lot of food and water of course. We gave it its first name which is Elk River....Even some people still call it that today. I notice that there's Elk River this and Elk River that. (*Crow*)

When you look at river tributaries, they all have a meaning when you view how they are connected. Rivers and springs are to be respected. You can't be around them when night falls. Otherwise there are certain spiritual entities that come into play. (*Northern Cheyenne*)

It was named the Elk River because there was quite an abundance of elk along the river, drinking, using it as a life-giving source. They had to drink water. From what I understand there used to be herds of elk along the river. We used the hide. We used the teeth and we ate the meat... Wedding robes were made from elk hide. Wedding robes are beaded strip blankets and porcupine quill work was put on there or later after trade came to this area beaded medallions looked beautiful and they were given to brides of Crow men. The hides were valuable because of the size. Of course, we used the teeth too. Two teeth from each elk were put on the elk tooth dress. If you had a dress with a lot of teeth on it that meant you were from a wealthy family. That your husband, your son, or

your brother was a good hunter. That elk teeth were symbolic of wealth and the ability to hunt. (*Crow*)

The Crow used the Yellowstone River from the very headwaters to where a trickle of water comes out of the rock that takes you five minutes to fill a cup. They used every inch of it. (*Crow*)

The water was always there, as us Crows, just like the other tribes, we camp along the rivers, and the Yellowstone is a river that runs through our reservation. (*Crow*)

The Indian people always fed the river before they crossed it... They would give it a piece of fat or a piece of meat. And ask for safety before they crossed it. We still do that. Even today occasionally those who believe in the traditions will go up there and throw a little bit of fat or something and ask for blessings because of its power. (*Crow*)

God looked down and saw the driftwood going down the river. And the river is life. River is symbolic of life and as driftwood goes down this life, float down, they eventually will end up on some bank and another one will come and another one will come. And if you ever seen the driftwood, they eventually tangle together and stay together. That's what he meant for the Crow tribe to be; to drift along with life but to form somewhere, to cling together and to help one another. To relate to one another. That's the clan system. I envision it to be the Yellowstone River, I don't know why. (*Crow*)

B. Descriptions of the River

It used to be that grizzly bears were [native to] this area. Same way with elk, they originally were a plains animal that got pushed out of their normal, natural habitat. They made the adjustment and are thriving. (*Northern Cheyenne*)

The Yellowstone River was like a big sweep that came down this valley and it was constantly changing directions. Why do you think we have this great soil that we got here? (*Crow*)

The Cheyenne hunted buffalo all through that area. They had a lot of contact with the Yellowstone River. They allied with the Sioux and evolved into the confluence of the Yellowstone and Missouri. There was a lot of game. (*Northern Cheyenne*)

There's a lot of elk in this valley, the richest valley in the state of Montana. Right now, they're growing sugar beets and whatever....They make a lot of money on that, farmers do. (*Crow*)

Do you want to keep this conversation focused on the Yellowstone or with the tributaries? They contribute too. This is all part of it. You know we are closer to the Tongue and the Bighorn and they are tributaries to the Yellowstone. (*Northern Cheyenne*)

Though it's life-giving and it can be beautiful to look at, it can be dangerous too, because it can ruin a lot of land, threaten a lot of homes. I thought about whether someone was cruel to this river, but of course it was from extra melting winter snows. So all of it can be good or bad. But those are the things I think about. (*Crow*)

You can use that water; you know that water is there... For us we know it is going to flow all the time so we know that there is a bigger river we can run too just in case. (*Crow*)

I enjoy looking at the river, because water is life. That's what we've been taught. And it's precious, the water is. And anything that is growing along the river because of the water, the life that the water gives, you know, I always think about those things,...because I'm an American Indian and because I appreciate those kind of things. I've been taught by my mother to think about those things and, of course, you know in these modern times when everybody, red white blue, anybody, has become aware of so many of these kinds of things that are important to us as human beings, you know, no matter what race we are, what culture we come from, water should be important. (*Crow*)

In one of the stories, in the wintertime they would go down there and bust up the banks to get water. They would swim in it too and get water for soups and to bathe themselves. These were some of the important stories that relate to the mouth of those tributaries in the Yellowstone that affected them. There were a lot of mosquitoes at that time so what they did was go by the banks and get themselves wet and put that mud all over themselves. That is how they kept the bugs off... With mud on, the bugs don't really get to you. There is good in that little mud over there too. (*Crow*)

When the elders told me that story about how God looked down and wanted to formalize the Crow tribe with formal relationships, I always think about the Yellowstone River, that's what he saw. (*Crow*)

They used those areas [tributary confluences] a lot more in the wintertime because those areas had a lot of trees held the winds back. (*Crow*)

The Yellowstone River was detrimental to the Crow Indians. In 1838, a riverboat came up the Missouri River; Fort Union, unloaded. Ten days out of St. Louis, one of the people on the ship got very ill. The captain immediately recognized it as small pox and they quarantined the man... Well this guy with the smallpox got up and started counting his blankets he had to trade... He traded his blankets to all of the tribes of Indians, and it killed approximately 77 percent of all of the Plains Indians in 1838. (*Crow*)

Crow country was the last area settled in the whole United States and it wasn't until the treaty in 1868 when the Crow ceded away the western part of the Crow nation, the nine million acres that is from Livingston down to Park City on the Yellowstone River. (*Crow*)

When Clark came down the Yellowstone, and he was getting down close to the Missouri River in the Sidney and Glendive area, his diaries talk about having to put his canoes ashore and wait for the buffalo herd to cross the Yellowstone River. This happened to him in the diaries three different times between Terry and Glendive. He said he would have to get out and wait maybe an hour for all these buffalo. So you know there was thousands that crossed right there in front of him... the Yellowstone Valley was larger than all of the tribes of Indians. Why do you think the Sioux wanted this country over here? They wanted the buffalo. I always call it the buffalo economy, because at one time we depended on the buffalo for our lodges, our clothes, food. There was absolutely nothing that was not used out of a buffalo. (*Crow*)

We used to swim there a lot but then they started closing off Two Moons Park. I think there are still some individuals that get firewood from around that area. (*Crow*)

C. River Valley Plant Life

In the plants and the vegetables that flourished near the Yellowstone River is what drew us. Plains Indian people always tried to live near rivers because of water. (*Crow*)

There are certain herbs and medicinal plants. Certain pockets of areas only found along these tributaries of the river (*Northern Cheyenne*)

In the past, we were river agriculturalists. We grew corn. We were with the Hidatsa at one period in time. The Hidatsa lived in North Dakota, and we were one tribe. We planted corn, we ate fish, and the game, deer, buffalo, elk, whatever that was there, but we grew corn, squash and all these vegetables. The Native Americans in this country have provided 60 percent of all the foods, squash and all these other vegetables that were there. And there's some other plants that people think are weeds, but they aren't. They are foods and medicine, we use them. (*Crow*)

D. Ceremonial Uses

I want to go back a little bit and talk about the cultural uses. If we go back to the connection of historical use, we need to focus on that a little more and say how the river is used by you and the tribal members. I think we have to start with our world view as to how the world operates as seen from the Northern Cheyenne there are ceremonial uses. (*Northern Cheyenne*)

There are many Crows that go into the Yellowstone Valley today to do prayers and fasting because they are traditional sites. (*Crow*)

The river is a giver of life but it can take your life away also. There is this sacredness that we attach to water and the animals. "Fish" in Cheyenne also means "turtle." Turtle is a sacred symbol to the Cheyenne. It is symbolic of a male also. These things are so interconnected that, when we talk about water, we have to look at everything that deals with water because water is everything. It is in the form of fish, it is in the form of

humans, it is in the form of animals. When we talk about ceremonies it is all in reference to life. (*Northern Cheyenne*)

Some of the things that we do here...we still do them on the Tongue or the Bighorn or the Rosebud. Those things were part of the cultural practice along the Yellowstone. (*Northern Cheyenne*)

Whether it is having sweats or fasting, you would fast standing up inside the river. (*Northern Cheyenne*)

We have to look at all these different cultural values. Why we have so much respect for water itself. Water ultimately flows out to the oceans. (*Northern Cheyenne*)

It is a living entity for the Cheyenne people. Where does it come from? Springs are also sacred to the Cheyenne. There are stories that say you can't be around springs at night. There is an animal that protects it and if you see it you will go haywire or move on...take a journey because of this animal. Why does this animal have this power? You have to go back further and say why does it protect the springs? It also lives along the creeks. (*Northern Cheyenne*)

Culturally speaking, water is everything. (*Northern Cheyenne*)

And yet, it's one of the most powerful elements that can destroy and kill people... So we pray with this water and we take it as maybe a sacrament like as Christians, we pray on it. Even our children, we pray that when they go swimming, they don't have any accidents in the water or we pray that sometimes we get flooded. (*Crow*)

Water is one of the most important elements that we have. As a tribal member, we use water in our ceremonies, our sweat lodges, you know. There's mainly four important elements that are very important in life. Water is one of them. Without them you can't survive. (*Crow*)

A medicine man took us in there, he was an elder. Before he took us in there he explained the importance of the water. And back then, when I was young, maybe the water wasn't so polluted because we did jump in. He took a dipper of the water, and he prayed over it. He said, 'This water is life to us human beings, and to the natural resources that grow around here, and to the animals who depend on this water.' He said, 'Don't ever be cruel to this water. No matter what form, whether it comes out of your faucet or if it is free running like this.' (*Crow*)

And the Crow term for water... means "going along." And when you say go get me some water, or bring me a dipper of water, it means to disturb the flow and bring some of it. (*Crow*)

Yes, it's sacred. Lots of things are sacred to American Indian people; water is especially so, because we use it in so many things, you know. Not only do we drink it to nourish our

bodies, we pray before we drink it, because we know what it does for the body. We also use it in our sweat bath, we use it in the Sun Dance, we use it in the Tobacco Society, which is a religious organization in the Crow Tribe. We use it in almost everything that is connected to our beliefs in nature and in God. It connects us with God. And so it's a very sacred commodity. We just cannot live without it and we know it. So, it's not taken lightly, water, it's not taken lightly. (*Crow*)

You can use stories of the old people like Plenty Coups. They came out of the sweat bath and jumped in the river no matter if it was ice cold. They would go in the sweat even in the winter time and jump in the water. (*Crow*)

If you go on a fast... you will know that importance of water. (*Crow*)

It's serious on the earth, the land. It was just amazing to me what kind of power and life that water holds. (*Crow*)

E. Interconnectivity

The river is *in* the willows that form the lodge that comes from the riverside. He [medicine man] said that the wood too comes from the riverside that we use for the fire. (*Crow*)

It is a belief system. It is not something you can look at scientifically. It is so important that it is part of our religious belief. You can't separate it [water] into farming, etcetera; it goes way beyond. You can't separate the importance of water in our belief system. It is who we are and you can't separate that. The western world is very segmented...[but from] the holistic view...you can't have a coherent system broken into parts. (*Northern Cheyenne*)

In a nutshell from a cultural point of view all these things are interrelated. (*Northern Cheyenne*)

II. Beliefs of the Elk-Yellowstone River Valley

A. Water Rights

Part of the Yellowstone River in terms of water 'acre feet' flows in there. We have the opportunity to be able to use that amount of water we use. From a business kind of view. (*Northern Cheyenne*)

All those rivers were in our lands and territory, and there's a treaty or there was an act that says all the waters still remain to the people that have the first right, first there, first right. (*Crow*)

We own water but how can you own water? Like how can you own the air? You can't. We understand the white man's system of ownership but it is tough to integrate those

things together. For us we still retain those cultural boundaries of how important water is. (*Northern Cheyenne*)

I guess it is the States that are fighting over the barges down on the Missouri and Mississippi. We are all one but down in the lower states a judge ordered more water for more people downstream. So North Dakota, South Dakota, and Montana has suffered a loss of how much water they can use up here and there is more water being used for the barges. That is one of the battles between the lower and upper states of the Yellowstone. I see a battle for control of the flow. (*Crow*)

The most important thing is for the State, the tribes, and individuals that use the water should get their fair share of the use of the water, and benefit the people who live on the water. I believe the distribution of the water is the most important, because what ever happens along the Yellowstone affects us too. (*Crow*)

The Crow Tribal leaders sold our water rights away. Some of the Crow, we call them the Allottees' Landowners Association, which is the organization I am part of. One of our members wrote a letter to the Department of Interior, in Washington, D.C. and stated that the tribal administration as a whole, as an organization, has no jurisdiction over our land. Tribal allottees are individual land and water owners and they have no right to negotiate on their behalf. So the judge over there in Washington D.C., Lamberth, I believe, he acknowledged that. So the US Justice Dept. stopped that ten million dollars the administration was trying to get for the individual water rights, between here and all the way to the Yellowstone. (*Crow*)

B. River, Land Ownership

I think we still own some of the islands on the Yellowstone River, I think. We're supposed to own the mid channel of the Yellowstone, the southern end which is still supposed to belong to the Crow Tribe. (*Crow*)

Geographically speaking the limited access to the Yellowstone is an issue. The Yellowstone River is an important cultural location. As time goes on, memories start to fade and physically the usage of the Yellowstone is almost nonexistent today just because we don't have access to that river anymore. There are certain times that we can have access to it like any other citizen. That is recreation. (*Northern Cheyenne*)

I used to be very bitter about the things that were taken from us, until I visited a tribe in California and we dug a village site right in front of Nick Nolte's house, the movie star, and he allowed us to do this ... The tribe was just pitiful... They took us to a hill overlooking Malibu and there were these naked people in bikinis doing volleyball and she was up there praying and I thought what a contrast this is. And I asked her and her father, he was all decked out in shells and stuff. I said, you know so much has been taken from us as Native American people, I said, are you bitter?... He said we are the old Americans, they are the new Americans. It was meant to be. We remember who we are. We value these things and we will continue to do so. The new Americans value what they

value and they do what they do, because God meant for them to be that way. I have no hostility toward them because they are God's creatures and they are meant to be here just as we are meant to be here. Holy smokes, we were digging one of your old villages in front of a movie star's home and you are not bitter? No, I'm not why should I be. They are God's creature too. That really changed me. So, when I come here and I talk about the Yellowstone and the people who are living by it now, the ranchers, the farmers and they took all that land away from the Crow people and reduced it in size and time and time again, they took the Yellowstone River from us. But they were meant to be there. They're hard working people... I hope that it benefits them and what they produce for life. The life continues there, see. And my visit to that Californian tribe has completely changed my life... They had no bitterness in them. I started thinking differently. And that's how I look at the Yellowstone now. (*Crow*)

III. Management Concerns

A. Protecting the Quality of Water

We were in court with Fidelity. And the judge finally made a ruling that Fidelity could go ahead and drill and sink some more CBM wells and there was a certain percentage that I can't remember that they could dump untreated into the Tongue River. That is on top of what Wyoming is dumping into the river. There is pollution from the Montana CBM wells. (*Northern Cheyenne*)

The cattle that are along the river, they have runoff that pollutes the water. And sometimes we have people that dump their house sewage into the rivers. We don't see it, but they dump that junk into the rivers, and I guess stricter laws and I guess enforce these laws and maybe give them some stiffer penalties, but they need to manage that water. (*Crow*)

You hear about the coalbed methane water. It has already affected the health. It is probably high in saline and that is number one polluter right now of both the Rosebud and the Yellowstone. (*Northern Cheyenne*)

From the coal fired power plants, we have that liquid metal mercury that is in the pollution that comes up out of the smokestacks when the rains come and the snows and the spring waters runoff, these liquid metals go to those points, and they end up in the rivers. And when they end up in the rivers, the fish have mercury in their bodies... When that mercury gets into the drinking water that is the point where we don't want to see our kids having birth defects. (*Crow*)

We are forgetting about the biggest contributor to the Rosebud on into the Yellowstone and that is Lame Deer Creek. The mouth is south of us here. I am old enough to recall that it was a very vibrant creek. There were fish in that creek. We used to swim in that creek. We used to get our drinking water out of the creek...nowadays... talk about human damage to the creek. (*Northern Cheyenne*)

It's become so polluted on the reservation now; there are a lot of concerned individuals. They can't even use it in sweat baths anymore. They used to come out of the sweat bath and jump in the river... They would go in the sweat even in the winter time and jump in the water. Now a-days there is a little hesitancy. They will bring the water from maybe their faucet. They'll bring it in great big buckets and they'll use that. They rarely jump into the river anymore because of it's pollution on the Big Horn River or the Little Horn River. So, that's the kind of concerns that American Indian people have. (*Crow*)

The real contamination is our sewers down there. Holding ponds and those things are overflowing into Lame Deer Creek. You can see where it has killed all the vegetation. It is starting to smell. I don't know how far down it goes. I know they walk along there. There is a spring down there and it has been impacted by the overflow. Nobody seems to do anything about it. That is a tributary into the Rosebud. And it contributes to the Yellowstone. (*Northern Cheyenne*)

We don't even know what kind of water quality we have here. 2002 was the last time the tribe had an EPA staffer study the water quality from the creek down here all the way down to the Yellowstone... So whatever you do here, it goes into the Yellowstone. (*Crow*)

We are slowly...we have natural resources we have Native American studies. We have policies. We are trying to make it work and segment it. (*Northern Cheyenne*)

The problem is stable drinking water down the road from the creek. We know there are springs underneath and people that used to get good water, but we just wanted to know about the creek. Because some people still use it, like the kids. They swim here and then they drink the water. So it is those kinds of issues that the tribe isn't doing anything about. The conversation district should gather information like that letting people know what we have here, you know? (*Crow*)

Right above the creek here is where people started putting in their game kill. I tell them it was a tradition from back then, but I tell them that back then this whole land was different. It was safe to do that but not anymore. (*Crow*)

B. Water Quantity: Drought and Shortage

The drought is the biggest problem, even in Billings in the Blue Creek area. (*Crow*) The Rosebud used to be called a river at one time. That has been drying up. There has been a drought area and stretches where there is nothing and that has impacted from Kirby to Busby and to the northwest part of our reservation which then goes off the reservation near Jim Town. That impacts what isn't delivered to the Yellowstone. Tongue River water users association has used our water, I don't know if we have a contract or whatever. When there is a shortage they lease from us. (*Northern Cheyenne*)

There is an idea floating out there, that they wanted to take all that water out of the Tongue River Reservoir and pipe it to Kirby. They had at one time talked about it but lately I think it has been sitting idle. (*Northern Cheyenne*)

I don't know what has happened there. Lame Deer Creek is basically dry. I remember in the winter time having to chop holes in the ice to get water. (*Northern Cheyenne*)

The drought has been impacting us the last ten years. It is no different than out there. Farmers and ranchers have had to tighten their belts. (*Northern Cheyenne*)

The thing more locally that comes to mind is erosion. One of your questions is what kind of changes have you seen in your lifetime. A lot of it has. Especially along the creek area. A lot of the trees and plants have disappeared. I don't know if that is from drought conditions. (*Northern Cheyenne*)

C. Free-Flowing River

I wouldn't want a dam controlling it because of its legendaryit's long, and I have heard that it had not been dammed up. And I was glad of that. I don't know. To me it's a free river, it's a free-flowing river and I kind of like that idea. (*Crow*)

I look at it this way. This valley has probably taken care of itself for the last forty to fifty million years. Why do we have to start screwing around with it now? (*Crow*)

Mother nature's doings, and we can't control those things. (*Crow*)

But that is my feelings about the Yellowstone Valley and the Yellowstone River. From the headwaters to the mouth of it, leave it alone. (*Crow*)

I think it is the last free-flowing river. There are no really obstacles. (*Crow*)

D. Rip-Rap: "Fighting Nature"

The Yellowstone has always flooded. When the Indian people were here, if it looked like the water was getting high they just moved out. They never fought nature, they lived with nature. Now today, we fight nature; by rip-rapping the rivers as we do, by trying to hold the course, trying to keep it from washing away land. We are constantly in a battle with nature and I think nature is pretty unbeatable when it makes up its mind. (*Crow*)

Nature can't clean [the valley] and sweep it anymore. And nature would if we would just leave it alone. And the thing of it is, we keep rip-rapping it and the banks are getting deeper and further down because of the rip-rapping. It is not good. (*Crow*)

The rip-rapping and the fertilizing and everything that is going on in the land right now are affecting the river because nature cannot cleanse it. Nature cannot cleanse the valley. (*Crow*)

E. Riparian Areas and Wildlife Concerns

One of my relatives caused a lot of damage to the upper Lame Deer Creek. You talk about damage to the riparian. He stripped about one-half mile of the riparian area. He has alfalfa in there now. That is a real no-no. And the Rosebud the same way. I think that is another one. They stripped the riparian area so they could have more cropland. (*Northern Cheyenne*)

The riparian zone is and is not healthy. About a month ago we had chronic wasting disease training. That is a disease that is carried by deer. It is coming this way. This season we are encouraging hunters to bring in the heads so we can take some of the brain stem and send in a sample. (*Northern Cheyenne*)

The deer population was almost decimated. The settlers here, the cowboys had a lot of conflicts. As a result the deer population almost disappeared. The Cheyenne started butchering some of the beef to sustain. They were on the verge of starvation. There was a point when the antelope and deer were just about all gone. (*Northern Cheyenne*)

Growing up, there weren't that many cars here. You could go into the hills and run into deer. They propagate real quick. Then cars were introduced and then pickups and then four wheel drives and spotlights. People hunted and started killing the deer population. They never implemented a season or some kind of control. When I became superintendent they passed a spotlight ordinance. In three years time the population came back. (*Northern Cheyenne*)

We could have an elk population but when someone says elk you have two hundred people out trying to get the elk. (*Northern Cheyenne*)

I remember the catfish and the bass and the gold heads and yellow bellies. That was the extent of my diet when I lived in Birney. In terms of culturally speaking...a lot of the water animals were pretty significant to the Cheyenne people. (*Northern Cheyenne*)

You can look at the native fish that used to be coming up from the Yellowstone, the sturgeons and there are other species. [We need to] try and increase the water flow....I think that is a benefit to the tribe as well as others. (*Northern Cheyenne*)

There was a study done before they had these diversion dams. There was no fish passage. Now we are working on installing fish passages on these diversion dams so we can get back our native fish. That is what we are working on. They found...a sturgeon way up close to the border that migrated way up there. They want to see more spawning the area. More native that comes from Yellowstone that comes up to spawn. That is what we are working on. (*Northern Cheyenne*)

Because of the drought and some of the species that we depend on...deer are getting scarce, though lately they have been coming back. (*Northern Cheyenne*)

Vegetation growing along the river and some of these vegetation things control the river itself. God put those things by the river to help the river I think. The water gave life to those things so that it would happen. That was the riparian use of the river. The vegetation maybe willows, maybe reeds, all those kinds of things that grow naturally along river ways. They're all meant to help the river itself. (*Crow*)

That there is a lot of natural life there, and I hope that people don't destroy that. There are turtles, water beings that are put there by God. That's their home. (*Crow*)

We must be careful not to kill off all the animals and things that are natural to our earth. That goes for the Yellowstone too. We must protect it for all time because it was meant to be there and everything that grows along it was meant to be there and every thing that is in it was meant to be there. (*Crow*)

F. Weeds

Introduction of new plants is pretty substantial because when you import hay from other counties you run the risk of introducing new species....You are seeding noxious weeds when you feed hay every winter. (*Northern Cheyenne*)

The Rosebud and the Tongue are all kind of deep in the noxious weeds...the salt cedar. (*Northern Cheyenne*)

Cook Creek and Tie Creek in Birney are all in the watershed. I see in the erosion and noxious weeds taking over because of cattle overgrazing. There is some management but they have to have rotation. (*Northern Cheyenne*)

Also vehicles...because we don't have ordinances that say you have to stay on this road otherwise your vehicle can be a carrier of noxious weeds. A friend always comes out to the place and picks different herbs and medicines. He said you have a virtual pharmacy here. There is about 35 different herbs that they use. We try not to drive over it. He comes out and we give him permission to pick those. (*Northern Cheyenne*)

We have noticed a real change in the cottonwoods. They have almost been non-existent, More so than other species of trees in other areas. That means we don't have a good riparian area and that might be another cause of erosion. Not only erosion but the introduction of other species of plants like noxious weeds [is a problem]. The weeds, are opportunists and that is an area where they can survive. (*Northern Cheyenne*)

G. Managing Human Use

Human use should be managed carefully. I do know that the Yellowstone River has a lot of recreational use, and sometimes human beings can cause damage. I think...[we should be] careful about...access...because human beings are naturally destructive....They step on things or maybe kick a turtle out of the way. Those kinds of things are what my primary concern would be. (*Crow*)

Billings is growing with no direction. All the City Council can think of is, 'Let's add them on so we get more taxes.'They are not thinking of the land, they are not thinking of the future....I truly worry.... My children's grandchildren are going to be in a deep hurt. That is about one hundred years from now. (*Crow*)

Instead of using everything, leave some for the fish. (*Northern Cheyenne*)

To see those people recreating on the river gives me a feeling that human beings still appreciate it as much as I do. Not only is it beautiful to see, but those people were having a good time. Hopefully they're loving and nothing bad happens to them because if you are cruel to the river, it will be cruel back to you. (*Crow*)

I hope they are not peeing in the river or something. The water doesn't like that when refuse is being put into the water. You think of all the refineries and factories that might be dumping in there that the water doesn't like that. It's the life of it. (*Crow*)

From a Crow Tribe member, I guess there was a buffalo feeding ground that was the hub of the other tribes coming in and feeding off it and we would always have to tell them to get enough and then get out, to leave. But they wouldn't do it so that is where all the battles were. (*Crow*)

I would maybe manage the recreational use better because of human destruction. You hear about people going out there floating on the river, whenever I see them, and I did just recently when I went to Bozeman, I saw some people on the river and I prayed for them. I just said a real quick prayer for whoever was on the float, because the river can be cruel. It is life giving but it can take you like that. (*Crow*)

If I had anything to say about it at all, there would be no subdivisions in the Yellowstone Valley. I would really try to get people to move out of the valley and then rip up the blacktop and concrete that we have down in the valley. Because one of these days we are going to go to the fridge and we are going to say, "Wow, there is nothing in it because we have blacktopped every acre of the finest, fertile land in the world. Yellowstone Valley is a great producer. (*Crow*)

Why can't we go up on the ridges up out of the valley and save the valley for farming? It is really kind of ridiculous what is going on. I moved up to Billings almost eight years ago, and west Billings has moved a mile up river; probably three or four miles up river and all the way across the Yellowstone Valley and took up two, maybe three thousand acres of the finest, fertile land in this nation. It is fertile because of the Yellowstone River and we could irrigate it. (*Crow*)

H. Threats to Cultural Activity

The traditional use is still with us today. They don't practice it as much as they used to because we are losing our elders. (*Northern Cheyenne*)

You have to depend on the Anglo historian and archaeologists and anthropologists because our language is just now being written. We finally have an orthography that is approved by the council. They are trying to teach reading and writing to Cheyenne with some pretty fluent speakers of Cheyenne. The aboriginal use is also in that particular document. We were connected with that Native Action. (*Northern Cheyenne*)

Dr. Boggs...he used to be with UM but he is an anthropologist and he has a really interesting history. He was working with the tribe back in the late 70s or early 80s. The tribe had a research project and they did some really outstanding research and I think it all burned up when the building on this site burned. (*Northern Cheyenne*)

To go down to the river and have a ceremonial sweat we would have to have special permission. There are many obstacles of bureaucracy getting in the way to do what is done on any other tributary... Federal Indian policy has dictated why we don't use the Yellowstone as much as we could. (*Northern Cheyenne*)

There was a lot of game...[and] it is history to us. The first thing the dominant society asks us is, 'Where is your empirical evidence?' Well, they died off. (*Northern Cheyenne*)

Early on....you can document and they wanted to make farmers and ranchers out of Native Americans. At that same time you have these federal laws that say you can't do that anymore. (*Northern Cheyenne*)

The EIS [Environmental Impact Statement] for Otter Creek [coal plant] development is kind of a repeat of another court case that the Bureau of Reclamation wouldn't include the impact on the Northern Cheyenne in the study. They went clear to the Supreme Court and it was handed down that the Bureau of Rec. needed to do that. I guess they are not good learners because they did it again. (*Northern Cheyenne*)

Not very many of my people listen any more to nature and it's kind of sad. I blame it on economics. Life is really, really hard anymore for Indian people... We're competing with the modern world too. (*Crow*)

The US government can decide what they want to do. They can wipe us out at any time with the stroke of a pen as a tribe, Congress can... If there's something good, they want to take that land away, whatever we have. (*Crow*)

There are people always handing money under the table for tribal council to not let our people develop anything at all. (*Crow*)

Appendix
An Adapted Protocol—Agriculturalists

1. How many years have you been in operation here?
 - a. Do you live here full time?
 - b. IF NOT: How many months a year is your home occupied?
 - c. How do you describe your place to people who have never been here (there)?
2. What was it about this site that made you (your family) want to locate here originally?
 - a. Is the river important to you?
 - b. What do you like best about being near the river?
3. Are there any problems associated having property this close to the river?
 - a. What do you think is the most important problem?
4. Has there ever been erosion damage to your lot?
 - a. (If yes) How much of your place was affected?
 - b. Is there anything that should be or that can be done about erosion?
 - c. Why would that be your course of action?
5. Looking ahead 10 years, what do you expect your place to be like?
 - a. Will the physical facilities change?
 - b. Why is that?
 - c. As you think about the next generation, what are your primary concerns?
6. Some people talk about the river corridor....How is the river corridor different from the river itself? (follow-up to explore “riparian” zone –with or without using that word)
7. Besides what you have already described, what are the various uses of the river?
 - a. How do you think the rights of all users can best be balanced?
8. What keeps you here?
9. Of everything we’ve talked about, what is most important to you?

An Example Excerpt from a Verbatim Transcript

Question: Is there anything else we should talk about?

Response: There has been a time or two when I've wondered how come we couldn't hook an electric generator up to Yellowstone Falls in Yellowstone Park and generate some electricity. That just seems so simple to me. We wouldn't have to buy from PPL Montana, or whoever the hell they are. We'd just have our own...(laughs)

Question: Hey, I think that's in Wyoming. (laughs)

Response: Yeah, but they wouldn't know. They wouldn't be checking on us that close.

Question: Now see, I'm from Wyoming. Obviously, we have to watch out for you guys up here. (laughs)

Response: Oh, I see. Well, we'd try it anyway. Believe me, we'd try it. Besides, there's probably enough there for both of us, both Wyoming and Montana. There's a lot of waterfall there, you know....I don't know just how fast you could turn a generator, but I'll bet you you'd create a lot of electricity.

Yellowstone River Cultural Inventory—2006

Part I: Missouri River to Powder River

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Yellowstone River Cultural Inventory--2006 Preface

The Significance of the Yellowstone River

The Yellowstone River has a long history of serving human needs. Native Americans named it the Elk River because of its importance as a hunting environment. William Clark explored much of the river in the spring of 1806 and found it teeming with beavers. By 1906, the US Bureau of Reclamation was sponsoring diversion projects that tapped the river as a source of irrigation waters. The river then enabled “twentieth-century progress” and today it supports many nearby agricultural, recreational and industrial activities, as well as many activities on the Missouri River.

Management of the shared resources of the Yellowstone River is complicated work. Federal and state interests compete with one another, and they compete with local and private endeavors. Legal rights to the water are sometimes in conflict with newly defined needs, and, by Montana law, the public is guaranteed access to the river even though 84 percent of the riverbank is privately owned.

Interestingly, in spite of the many services it provides, the Yellowstone River in 2006 remains relatively free-flowing. This fact captures the imaginations of many people who consider its free-flowing character an important link between contemporary life and the unspoiled landscapes of the Great American West. As a provider, as a symbol of progress, as a shared resource, as a management challenge, and as a symbol of our American heritage, the Yellowstone River is important.

Purpose

The Yellowstone River Cultural Inventory—2006 documents the variety and intensity of different perspectives and values held by people who share the Yellowstone River. Between May and November of 2006, a total of 313 individuals participated in the study. They represented agricultural, civic, recreational, or residential interest groups. Also, individuals from the Crow and the Northern Cheyenne tribes were included.

There are three particular goals associated with the investigation. The first goal is to document how the people of the Yellowstone River describe the physical character of the river and how they think the physical processes, such as floods and erosion, should be managed. Within this goal, efforts have been made to document participants’ views regarding the many different bank stabilization techniques employed by landowners. The second goal is to document the degree to which the riparian zone associated with the river is recognized and valued by the participants. The third goal is to document concerns regarding the management of the river’s resources. Special attention is given to the ways

in which residents from diverse geographical settings and diverse interest groups view river management and uses. The results illustrate the commonalities of thought and the complexities of concerns expressed by those who share the resources of the Yellowstone River.

Identification of Geographic Segments

The Yellowstone River is over 670 miles in length. It flows northerly from Yellowstone Lake near the center of Yellowstone National Park in Wyoming. After exiting the park, the river enters Montana and flows through Paradise Valley toward Livingston, Montana, where it turns eastward. It then follows a northeasterly path across Montana to its confluence with the Missouri River in the northwestern corner of North Dakota.

Five geographic segments along the river are delineated for purposes of organizing the inventory. These five segments capture the length of the river after it exits Yellowstone National Park and as it flows through eleven counties in Montana and one county in North Dakota. The geographic delineations are reflective of collaborations with members of the Yellowstone River Conservation District Council and members of the Technical Advisory Committee and the Resources Advisory Committee.

Working from the confluence with the Missouri River towards the west, the first geographic segment is defined as Missouri River to Powder River. This geographic segment includes some of the least populated regions of the entire United States. This segment is dominated by a broad, relatively slow-moving river that serves an expansive farming community whose interests blend with those folks living along the seventeen miles of the Yellowstone River that traverse North Dakota. Here the Yellowstone River is also important as a habitat for paddlefish and Pallid sturgeon. At the confluence with the Missouri River, the size of the channel, significant flow and substantial sediment carried by the Yellowstone River makes its importance obvious to even the most casual of observers. Prairie, Dawson and Richland Counties of Montana are included in this segment, as well as McKenzie County, North Dakota.

The second geographic segment, Powder River to Big Horn River, is delineated to include the inflows of the Big Horn and Tongue Rivers as major tributaries to the Yellowstone River and to include the characteristics of the warm-water fisheries. This segment is delineated to recognize the significant agricultural activities of the area and the historical significance of the high plains cowboy culture. This segment includes Treasure, Rosebud and Custer Counties.

The third geographic segment, Big Horn River to Laurel, essentially includes only Yellowstone County, but it is a complex area. To begin, important out-takes near Laurel divert water to irrigations projects further east. Additionally, it is the one county along the length of the river with a sizable urban population. Billings is known as a regional center for agriculture, business, healthcare and tourism. This area is notable for its loss of agricultural bottomlands to urban development. Irrigation projects are important east of Billings, especially in the communities of Shepherd, Huntley and Worden. These

communities and Laurel also serve as bedroom communities to Montana's largest city, Billings. It is in Yellowstone County that the river begins its transition to a warm-water fishery.

The fourth segment, Laurel to Springdale, ends at the northeastern edge of Park County, Montana. The river in this area is fast-moving and it supports coldwater fisheries. While there is little urban development in this segment, there are some rather obvious transformations occurring as agricultural lands near the river are being converted to home sites for retirees and vacationers. The geographic segment includes Sweet Grass, Stillwater, and Carbon Counties.

The last geographic segment is defined as Springdale to the boundary with Yellowstone National Park at Gardiner, Montana and is within the boundaries of Park County. The river leaves Yellowstone National Park and enters Montana at Gardiner. It flows in a northerly direction through Paradise Valley and is fast-moving. It supports a cold-water fishery that is well-known for its fly fishing potential. Near Livingston, Montana, the river turns easterly and broadens somewhat thus losing some of its energy. However, severe floods occurred in 1996 and 1997, and local groups have since spent many hours in public debates concerning river management.

Recruitment of Native Americans

Native Americans also have interests in the Yellowstone River. They are active in maintaining the cultural linkages between their histories and the local landscapes. For the purposes of this study a number of Native Americans from the Crow tribe and the Northern Cheyenne tribe were included. Native Americans were recruited by means of professional and personal contacts, either as referrals from state agency personnel, from Resource Advisory Committee members of the Yellowstone River Conservation District Council, or from other project participants.

Recruitment of Geographic Specific Interest Group Participants

The participants represent a volunteer sample of full-time residents of the towns and areas between the confluence of the Yellowstone and Missouri Rivers in North Dakota and the town of Gardiner, Montana at the north entrance to Yellowstone National Park. Participants were recruited from four major interest groups: agriculturalists, local civic leaders, recreationalists, and residentialists living near the river. A database of names, addresses and contact information was constructed for recruitment purposes. Nearly 800 entries were listed in the database, representing a relatively even contribution across the four major interest groups.

Individuals representing agriculture interests, including farmers and ranchers, were identified and recruited from referrals provided by the local Conservation Districts, the Yellowstone River Conservation District Council and the Montana Office of the Natural Resources Conservation Service.

Individuals holding civic leadership positions, including city mayors, city council members, county commissioners, flood plain managers, city/county planners, and public works managers, were identified and recruited through public records.

Individuals who use the Yellowstone River for recreational purposes, including hunters, fishers, boaters, floaters, campers, hikers, bird watchers, rock hunters, photographers, and others who use the river for relaxation and serenity, were identified and recruited from referrals provided by members of the Resource Advisory Committee. Participants were also identified and recruited by contacting various non-governmental organizations such as Ducks Unlimited, Trout Unlimited, the Audubon Society and by contacting local outfitting businesses.

The names of property owners holding 20 acres or less of land bordering the Yellowstone River, or within 500 feet of the bank, were obtained through a GIS search of public land ownership records. Twenty acres was used as a screening threshold to separate people who lived along the river corridor but whose incomes were from something other than agricultural practices (residentialists) from those who were predominantly farmers or ranchers (agriculturalists). The names were sorted by county and randomized.

Recruitment proceeded from the county lists. Other people living very near the river and whose primary incomes were not generated by agriculture were also recruited. These additional participants may not have had property that technically bordered the river and/or they may have owned more than 20 acres. In all cases, the recruits did not consider agricultural as their main source of income.

Participants were recruited by telephone and individual appointments were scheduled at times and meeting places convenient for them. Many interviews were conducted in the early morning hours and the late evening hours as a means of accommodating the participants' work schedules.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|--|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

A total of 313 people participated in the project, including 86 representatives from agriculture, 68 representatives in local civic roles, 76 representatives of recreational interests, 76 residentialists and seven Native Americans. A relatively equal representation was achieved in each geographic segment for each interest group.

Description of Interviews and Collection of Participant Comments

A master protocol was designed from questions provided by the US Army Corps of Engineers and approved by the Office of Management and Budget (OMB approval # 0710-0001; see example in the appendix to this volume). Questions were selected that would encourage participants to describe the local environs, their personal observations of changes in the river, their uses of the river and any concerns they may have had about the future of the river as a shared resource. Open-ended questions were used as a means of encouraging participants to speak conversationally.

The questions were adapted to the participants' interest groups. For instance, interviews with agriculturalists began with the question, "How many years have you been in operation here?" while local civic leaders were asked, "How many years have you lived in this community?" Similarly, agriculturalists were asked, "Are there any problems associated with having property this close to the river?" and local civic leaders were asked, "Are there any problems associated with having private or public properties close to the river?" The overriding objective of the approach was to engage the participants in conversations about the river, its importance and their specific concerns.

Participants were promised confidentiality, and open-ended questions were asked as a means of encouraging the residents to talk about the river, the local environs and their personal observations and concerns in their own words. All respondents were interested in talking about their perspectives, and they represented a variety of views of the river, including: farming, ranching, agricultural science, commercial development, recreation, civic infrastructure, environmental activism, historical views and entrepreneurial interests.

With only three exceptions, the interviews were audio-recorded and verbatim transcripts were produced as records of the interviews. In the other three cases, hand-written notes were taken and later typed into an electronic format. The total resulting interview data totaled approximately 2,700 pages of interview text.

Steps of Data Analysis

The content of the interview texts was distilled by way of analytical steps that would retain geographical and interest group integrity.

Segment-Specific Interest Group Analyses: Taking all audio-recordings, transcripts, and field notes as the complete data set, the research group first set out to determine the primary values and concerns for each geographic segment-specific interest group. The team began with the four interest groups from the segment Springdale to Laurel. Team

members read individual interview transcripts and determined a core set of values and concerns for the individuals represented. As a team, notes were compared and a combined outline of values and concerns was constructed for each interest group in the geographic segment. Quotes were then taken from each transcript in the set to illustrate the particular values and concerns.

Outlines of the interest group analyses for the Springdale to Laurel segment were then used as aids in constructing the interest group analyses in all other geographic segments. Care was taken to adapt the interest group analyses to highlight if, and when, the core values and concerns were different in each geographic segment. The Native American perspective was addressed as an individual analysis with attention to the specifics of those perspectives. Each of the 21 segment-specific interest group analyses was then illustrated with quotes from interviews.

21 Segment-Specific Interest Group Analyses

| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
|-------------------------------------|--|---|--|---|--|---------------------------|
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| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Segment-Specific Geographic Summaries: A summary of the values and concerns for each geographic segment was constructed using the sets of four geographic-specific interest group analyses. Geographic summaries were written to reflect the concerns that crossed all interests groups of the segment, either as points of agreement or disagreement, and were illustrated with quotes from the four relevant interest group analyses.

| 5 Segment-Specific Geographic Summaries | | | | | | |
|--|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
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| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

River-Length Interest Group Summaries: River-length interest group summaries were constructed for each of the four primary interest groups. For example, agricultural concerns from the five geographic segments were compared and quotes were taken from the segment-specific interest group reports to illustrate commonalities and differences. Similar reports were constructed for local civic leaders, recreationalists and residentialists.

| 4 River-Length Interest Group Summaries | | | | | | |
|--|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Organization of the Reports

Overall Summary of the Yellowstone River Cultural Inventory—2006: An overall summary of the inventory was written as a means of highlighting the values and concerns that cross interest groups and geographic segments. The segment-specific geographic summaries and the river-length interest group summaries were used as the bases for the overall summary. This report is by no means comprehensive. Rather, it is written to encourage further reading in the reports of each geographic segment and in the interest group reports.

Part I: Missouri River to Powder River: This volume includes the geographic summary for Missouri River to Powder River and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Part II: Powder River to Big Horn River: This volume includes the geographic summary for Powder River to Big Horn River and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Part III: Big Horn River to Laurel: This volume includes the geographic summary for Big Horn River to Laurel and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Part IV: Laurel to Springdale: This volume includes the geographic summary for Laurel to Springdale and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Part V: Springdale to Gardiner: This volume includes the geographic summary for Springdale to the boundary with Yellowstone National Park and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Research Team and Support Staff

The project was directed by Dr. Susan J. Gilbertz, Montana State University—Billings. She was aided in data collection and data analyses by Cristi Horton, Tarleton State University and Damon Hall, Texas A&M University. Support staff included: Amanda Skinner, Amber Gamsby, Beth Oswald, Nancy Heald, Beth Quiroz, Jolene Burdge, and John Weikel, all of Billings, Montana.

Missouri River to Powder River: Geographic Segment Overview

Interviews in the geographic segment Missouri River to Powder River were conducted June 4-9, 2006. A total of 66 interviews were conducted, including individuals with agricultural, civic, recreational, or residential interests as their primary concern.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|---|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
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| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Missouri River to Powder River: Geographic Segment Summary

I've never had a call from somebody saying, 'What's the status of the Yellowstone River?'...It's there, it will always be there. I'm not that worried about it. (McKenzie County, ND Local Civic Leader)

Introduction

A review of the interview data for this segment, Missouri River to Powder River, suggests that people in this area engage in four primary discussions when asked about the Yellowstone River. First, the notion of Eastern Montana is not simply a geographic reference. It is a defining concept that captures the agricultural roots and the cultural values of the people living in the study segment, and the river is an essential element within their understandings of Eastern Montana. Second, the river is discussed as a wholesome recreational outlet. However, shifting landownership is noted as an important change in the recreational context. Third, even though agricultural practices are viewed as the mainstay of the local economies, many participants discuss the long-term economic viability of their communities as a concern. Industrial and residential developments along the river's edge are seemingly remote possibilities and are generally discussed with references to flood plain restrictions and the stability of nearby dikes. Finally, discussions of managing the river are limited, but a variety of opinions are offered regarding bank erosion and stabilization techniques.

Eastern Montana—Unique and Stable

Among the people living along the Yellowstone River in the segment Missouri River to Powder River, there is an understanding of what it means to live in Eastern Montana. The notion is closely associated with agricultural activities, rural values and a sense of the river as essential and reliable. Among all interest groups, it is understood that agricultural activities shape the landscape and add stability to their communities.

It's Eastern Montana and Western North Dakota, which is plains....We live in a...unique place because the Yellowstone and Missouri Rivers meet right in our valley....We have the water here all the time, and, of course, it's an irrigated valley, with flood irrigation, so it's always green here. Even in the drought years...it's all green and lush. (McKenzie County, ND Local Civic Leader)

It is a source of water for anything and everybody that wants it. Right now, I live on my son's irrigated farm. It is his livelihood. We need the water. (Prairie County Residentialist)

Eastern Montana can change from one mile to the next. You can go from grassland, to mountains, to the badlands, really fast....All of the sudden you can have these huge gullies and crevices. We live in the Yellowstone Valley, which is...[irrigated] , and a large part of the valley is dependent on the river because they raise sugar beets. They get their water for the farming out of the river. They get their water at Intake. (*Richland County Residentialist*)

The Lower Yellowstone Irrigation Project...was started in 1906. We actually celebrated our 100th birthday....It's a Federal Bureau of Reclamation project, but it is run by the local people. And it's truly...unique because it straddles the border...So part of it, 66 percent of it is in Montana and 33 percent of it is in North Dakota....[It includes] about 17000 acres that are in North Dakota, in McKenzie County, and the rest is in Richmond and Dawson counties in Montana. (*McKenzie County, ND Local Civic Leader*)

There is more diversity up and down the Yellowstone with the irrigation. There may be some situations that you may need to have fish screens. They put one on the Tongue that saved a lot of fish. In terms of the irrigation,...a very small amount of water that goes out of the river. (*Dawson County Recreationalist*)

I think one of the biggest issues about the Yellowstone and Missouri Rivers is education about the river. Everybody is talking about huge impacts, and that we are wrecking the rivers, but if you look at the rivers, and see what has really happened, the rivers have dramatically changed for the better in the years. (*Prairie County Local Civic Leader*)

It's a whole different way of farming....A lady...[came] here one time, she was doing crop reports. And she was a dryland lady...and she said, 'Boy, I used to think you guys were out here trying to wear that ground out, you go over it so many times in the fall.'...[W]e're getting it smooth. Flood irrigation runs from this end, to that end. You have to have it pretty smooth. She said, 'Boy, I can see why you guys do that now.' Having been around a little bit, [she was] realizing that water won't go up hill. It goes down. (*Dawson County Agriculturalist*)

Irrigation, yeah, about every eight hours you got to be out there. All summer. You hardly get a day off, ever. It's dedication, man. (*Richland County Agriculturalist*)

[Because of] the Intake Project, the Lower Yellowstone Irrigation Project, all of the livestock...and hay [are produced]....It's the Ag industry that is greatly dependent on the river. (*Richland County Agriculturalist*)

Beyond the stability that agriculture provides, there is an emphasis on community involvement as central to the notion of Eastern Montana:

I've never had a conflict with anybody. We're just all good people. Small town thinking, basically. (*Richland County Recreationalist*)

We're just so involved community-wise. You know everybody. Everybody cares for everybody else in this community. We always said we're going to leave, but where would we go where we'd be as happy? (*Richland County Local Civic Leader*)

We also have a good community spirit, here....When something needs to be done, everybody gets behind it, and gets it done, whether it's someone who is in trouble with some disease, or somebody needs some help, or accidents. We raise money and try to take care of our own. We are independent, spirited people. We have not been influenced by a great deal of outside, here. Lots of folks in our community are descendents, three or four generations down, of people who were born and raised here. (*Dawson County Local Civic Leader*)

My husband and I both love Eastern Montana. That keeps us here. We really believe in the stability of being someplace and staying there. He was born on a ranch and he stayed until he got married. I moved every two years with my parents for the geographical cure. I don't think that was a good thing. I like staying in one place and getting established in a community. (*Dawson County Residentialist*)

We like the area. We like the conditions that we live in. You don't have to worry when you go to bed; you can leave your doors unlocked. (*Dawson County Agriculturalist*)

Locals also explain that the sparseness of population is a feature of Eastern Montana. Some regard this as a potential problem as it may leave the area politically disadvantaged:

[Our assets are] wide-open spaces, friendly people...[and] a lot of public land for recreation. (*Prairie County Local Civic Leader*)

I just like living here. The best thing about this country is there's nobody here....It's just being able to do something without people around you all the time, you know. Like, when you're traveling, or in the cities, [and] you want to turn around but there's always a car coming, there's always someone. You get out on these roads, and go. You got to look, but it's just something not having someone watch you all the time, just being able to be a little more of a free spirit....It's just nice to be able to do what you want. You want to take a leak? You do whatever you want to do. (*McKenzie County, ND Agriculturalist*)

We are nothing in [terms of] population base. If somebody runs out of water in a big area, they are going to look at available resources. That scares me. Make sure we keep our valuable assets here. I think we are being looked at as a resource to supply the rest of the nation. If we want to keep this here, my thought was dam it below Fallon and create a huge reservoir. Keep our water here....I hope that they

got the adjudication of the Yellowstone rights here. It is important. (*Dawson County Local Civic Leader*)

Montana and North Dakota are lightly-populated states. If you go down the Missouri River, then those states are not so lightly-populated, and they got more pull. You would like to think that the Corps of Engineers didn't do things like [favor the downstream], but go look at Sacagawea, and Fort Peck to some degree. It used to be that North Dakota was upset, but now Montana is catching on. In the last five to ten years, Montana started to get excited about [the downstream favoritism], too. (*Richland County Recreationalist*)

I think, as with everything in Montana, the real challenge is going to be balancing the political might of the more densely populated [areas] with the relative political nothingness of people that are on this huge stretch of the Yellowstone. What they do up there, is going to make-it or break-it for everybody downriver. (*Prairie County Residentialist*)

The latest big flap was when Fish, Wildlife and Parks wanted to close a recreation area near town—that really upset a bunch of people. Also, the policies [for] out-of-state hunters and their permits have been quite detrimental to Fish, Wildlife and Parks. The consensus around here is that Fish, Wildlife and Parks is looking for more finances,...to build their own little empires....For a while the ratio of out-of-state permits to in-state permits was too high. The proportion of hunting license fees for in-state versus out-of-state were out of proportion, also. (*Prairie County Residentialist*)

Locals often explain the river as a local asset for everyone, not just agriculturalists. Even if in some areas the river is not utilized a great deal, there is little concern about the river's ability to provide the people of the area with essential and reliable resources:

I've never had a call from somebody saying, 'What's the status of the Yellowstone River?'It's there; it will always be there. I'm not that worried about it. (*McKenzie County, ND Local Civic Leader*)

I think [the river] is a tremendous asset to Eastern Montana. I think there is room for everybody...[who] wants to use it, as long as they are responsible. Nobody should be shut out of it. I don't think we are anywhere near that type of thing happening....You have private and government people working toward a common goal of responsible usage. (*Dawson County Recreationalist*)

They tried raising sugar beets in the '20s and '30s [with water] from the Milk River, and it would dry up in July and August. This one has never dried up. We went through several years when it never rained at all, and there was still water to irrigate. We never wanted for water. (*Richland County Agriculturalist*)
Without the river, without irrigation, the farm wouldn't do anything. (*Richland County Agriculturalist*)

If we can't get to the water, there is nothing left. The irrigation is where all the economic development is. (*Prairie County Agriculturalist*)

We can get out on the river and you will hear us going back and forth, but I don't think we ever talk about work, or problems, or whatever. There are times it is really nice to get out there by yourself, too. (*Dawson County Recreationalist*)

I'm in one of those jobs where, if you start to get bent out of shape, you need to walk away from it. It's my mental health that keeps me coming back to that river. (*Richland County Recreationalist*)

Our place has been so important to us because of the location. We will have it in our family, always. When [our sons] come home to visit, that is one of the first things they want to do—go to the river. My son was in Korea, and he said he had to go to the river to get some serenity and solitude.... For me, it is the beauty of it, and the peace it brings to just look at the river and the trees and to listen to the water running. It brings a lot of peace to look at the beauty and the scenery.... For my husband and boys, it is a daily thing [to go to the river]. My [other] son is home from college, and he will just go to the edge and look for wildlife... They are into watching the wildlife. (*Dawson County Residentialist*)

I believe that most of the people...[who] live here believe the same philosophy. And we want to see our river stay the way it is. We...want to make sure that it's used for the [historic] purposes.... These dams [support] many thousands of acres of agricultural land.... The electrical power was generated [to] set up irrigation pumping power, [but that] has been slowly whittled away from the irrigation projects. I doubt that in the future you'll see any irrigation projects started. I mean, the way it looks to me, there's so many environmental rules, and then... [there's] the cost of power. These electric co-ops that have been using electricity, they get to use it, and if it's not used for irrigation then they get to sell it. This electricity from Fort Peck goes clear to Iowa, Ohio, [and] Indianapolis. (*McKenzie County, ND Local Civic Leader*)

There are very few people in Prairie County...[who] utilize the river. It is very undeveloped. (*Prairie County Recreationalist*)

Residents have strong attachments to the Yellowstone River as a central and defining element of their lives and their communities. They often contrast the area known as the Lower Yellowstone to other rivers and to the upper reaches of the Yellowstone River:

I grew up close to the Mississippi. I was on the Mississippi all the time...fishing...and a little trapping. Down there it's 'Old Man River.' This one here—this is the 'Prom Queen.' (*Richland County Recreationalist*)

It is pretty spectacular in terms of what you can see. You will have stretches from here to the confluence, and...it is back-to-back cottonwoods....[Then] there are

some really nice cliffs by Pompey's....The Missouri is considered wild and scenic, but it doesn't change as much....[The Yellowstone has] much more diversity. You can see agricultural things,...pretty farm fields,...islands, and trees...You get out here, and you can look for miles. At Terry, and by the Powder River, with the history of Custer camping there,...you can look up in the hills and damn near see it. (*Dawson County Recreationalist*)

We're lucky with the Yellowstone. This is a wild river. This is the last free-flowing river, and we don't have pollution like you have in a lot of other rivers....You have a couple of diversion dams, but there are no dams that control it. Yangtze River used to be the other one, but they blew it....They put that hydroelectric dam on it. (*Richland County Recreationalist*)

Recreational Resources—Few Conflicts, But Change is Noted

Local residents in this segment, Missouri River to Powder River, are generally able to use the river in any way they want. However, local changes are noted and issues concerning the diversion dam and the Pallid sturgeons generate a great deal of discussion. To begin, recreational interests and uses are greatly varied and are often reflective of the rural values maintained by the communities:

The Yellowstone is very important to me. I go hiking there every day, I guess....I just enjoy the beauty of it....[I go] five or six times a week,...wintertime, too,...probably for 30 or 40 years. At least 30 years. (*Prairie County Recreationalist*)

We are a hidden secret right now, but that...[isn't going to] last. I fish on it. I hunt on it. I have a jet boat that I play in the river with. Sometimes you go and float the river and relax. (*Richland County Recreationalist*)

Definitely the wildlife. There are times in the fall we will go down the river in our boat, and we will come around a bend, and the ducks and geese will about block out the sun. (*Dawson County Recreationalist*)

[Agate hunting] is getting passed down through the generations....We take our kids out with us....[and] I went with my dad when I was really little. He would spot one, and he would go, 'There, see that? That's the color; that's the look; that's what you want to pick up'....Then, while they would go fishing, I would do the agate picking. (*Richland County Recreationalist*)

Part of the reason we are still remodeling [our home] is that there are so many fun things to do on the river...we go do something else, other than remodel[ing]. (*Dawson County Recreationalist*)

There is a snowy owl that lives over here....He sits over here and eats pigeons....We see beaver in this channel when the water goes down. Bobcats, we

see bobcats, and raccoons; we saw a coyote one time... Down here we have seen an occasional rattlesnake. (*Richland County Recreationalist*)

There's catfish, mudcats...and the paddlefish....They are amazing. They are, probably, the best fish to eat on the Yellowstone—that I am aware of. You are limited to one or two a year. There are only certain areas along the Yellowstone where you can catch them. That is from Glendive to the Intake. (*Richland County Recreationalist*)

One thing we have noticed, we have started to see some elk come through. We are excited to see them come through. (*Dawson County Recreationalist*)

You'll see a lot of bald eagles,....In the last ten years, [we see] more and more. It's not uncommon [to] see four or five bald eagles. (*Dawson County Recreationalist*)

For the most part, recreationalists are viewed as neighbors, and access to the river is allowed as private landowners grant permission to friends.

Occasionally, you'll see boats. That's always kind of a highlight when you're down there hanging out, to see a boat or a raft go by. You wave; they wave back. (*Prairie County Agriculturalist*)

We've never stopped anybody who wants to come down and fish. People go down and hunt. They ask, and we'll let them. (*Dawson County Agriculturalist*)

I very seldom ever turn down an agate picker or a fisherman, if it's somebody I know. And if they drop beer cans or something, they just don't get to come back in. (*Richland County Agriculturalist*)

I would bet you that 90 percent of the time, if you asked somebody, 'Could I go down here?' they would let them. They're good people here, but they still don't want to be walked on. And so and that's where I think the conflict would come from, something like that....There just aren't a lot of access points on this river. We have this little park here, and then the boat ramp at the confluence. You go in-between...[those] two points, there's none. (*McKenzie County, ND Local Civic Leader*)

In our community, where everybody knows everybody, they know someone that has access somewhere. If they don't, there are public access sites. I have never heard of anybody complaining that they were denied access to the river. (*Dawson County Local Civic Leader*)

With recent changes, such as the purchase of local land for a private hunting facility, locals are aware of the limited points of public access to the river. This awareness lends itself to explicit statements regarding the values of public access:

Fifteen years ago, if you went up to a landowner and ask permission, seven out of ten times they'd let you go....[But] now, it's paid hunting. They want money, or they have it leased out to outfitters. This river bottom has a lot of outfitters now, where it wasn't [that way] before. (*Dawson County Recreationalist*)

The other things I see when someone from the outside comes in, they post their land. If they are from the city, they don't want anyone on their land. They want to run all over and hunt on your land, but they won't let you on theirs. (*Prairie County Agriculturalist*)

I hate the ideology of, 'I want to buy my piece of the last best place and then lock it up and keep everybody else away.' I can't see that. Access...[has] to be a key thing. One thing about our rivers in Montana...[that is] different than a lot of other states [is that] the state owns the water. The people...[own it]. (*Richland County Recreationalist*)

One of our problems around here is getting on the river with a boat. The best thing to do is use a boat that has a jet prop instead of a propeller, because our river is not very deep and it fluctuates. (*Prairie County Recreationalist*)

The Yellowstone, here, is hard to use because of access. On our river stretch we probably have three or four access points in 60 miles. That is the major problem. Secondly, it becomes seasonal use because of high water and low water....We have catfish, sauger and walleye. Of course, our paddlefishing has been controversial at times. They have commercialized it to the point that it brings in people from other states and countries, and they get here, and the season is closed. That is according to the regulations that protect the paddlefish. The season this year was ten days. (*Dawson County Local Civic Leader*)

One of the concerns around here is access for people to just go fishing, not necessarily everyone is going to float a boat. (*Dawson County Recreationalist*)

Access is the key. They're working on that a lot in the west, trying to buy easements so they can alleviate a lot of the problem[s]. (*Richland County Recreationalist*)

Hunting is worth a lot of money, nowadays. (*Dawson County Recreationalist*)

I don't know if you're familiar with Buckmasters—ever seen them on TV? It's a pretty large hunting group. They own some land north of us, by Savage. They have a pretty good plot of land down there. [Before they bought the land], you

could hunt down there, but, now, if you get too close, they're on you. They watch it pretty closely. (*Dawson County Recreationalist*)

There are very few places you can get on [to hunt] anymore. A lot of the outfitters have places leased out and then no one else can get on. There are a lot of people...[who] do that... You can't blame [the landowner]. Once they go to that, it is worth money to them. (*Dawson County Recreationalist*)

Some are concerned that as matters of local recreational etiquette people do not respect one another:

We've had some problems with access sites on private property....One guy, he just sat around and waited for someone to step above the high water line. He was there to chew them out and call the game warden. When it's private land, it's private land. (*Richland County Recreationalist*)

These guys take their clients out during the week, and their clients are happy to shoot pretty much anything. We let small bucks go. But they are worth money to the outfitters, so they shoot them. We have seen the quality of the hunting go down quite a bit over the years because those guys are making money. It sucks because the [clients] are from New York; they don't even live here. (*Dawson County Recreationalist*)

Some local landowners are now engaged in Block Management strategies as a means of establishing better control over recreational uses:

I do allow hunting, and I am in Block Management. I just signed a new three-year contract. I like the Block Management. [Hunters] have to sign up, and I know who is on my property. The money I get out of it, I probably actually spend...policing it....It does let me know who is here. Ninety-five percent of the people are happy with it, especially the out-of-staters. (*Prairie County Agriculturalist*)

Their name is on that piece of paper. I don't just put a box out. I make them come to my property. There are a lot of people that paddlefish there. North Dakota starts a week or two before Montana. My fishing thing is not really under Block Management, but I use my forms to regulate it. The game warden knows that. I don't get paid for that. But they have signed their names, and they have given their license numbers and descriptions. The people that ask me don't give me any trouble....The Block Management is a deal that allows a relationship between the landowner and the public. (*Prairie County Agriculturalist*)

Actually, when we signed up for Block Management, all of a sudden, we got a better quality hunter – the next day. So I don't know what it was...[but it seems] you get people that are serious hunters [and] that don't want to trash your property. (*Richland County Agriculturalist*)

In some cases, the recreationalists are implicitly looking for help with their concerns:

I don't think the public land should be outfitted. They shouldn't be allowed to hunt the public land. That is a major conflict. That is my biggest issue. (*Dawson County Recreationalist*)

I am concerned...that the Fish and Game [is not attentive to] how fragile the river [and] the fisheries are. They have always said the fish would take care of themselves. (*Dawson County Recreationalist*)

We used to have big deer out here. I don't know where they are anymore. I think that they have been over-hunted. People that come out here and shoot the little two-point bucks, and three-point bucks, they should shoot a doe. Leave them [little bucks] to grow. It used to be nothing to shoot a four-point buck, but you really have to hunt for them now. (*Prairie County Recreationalist*)

As far as fishing goes, the Fish and Game has done a good job of managing the fishery. They don't do a hell of a lot. When I say managing, I mean restricting how much is taken out. They have limited the paddlefish to 1000 per year. At one time they were taking over 3000 fish a year from Intake. The population was in a downward spiral at that point. We were concerned about that. (*Dawson County Recreationalist*)

Now, one thing that is probably going to pop up sometime when the river is low is MDU [Montana-Dakota Utilities]—the big power plant in Sidney. I don't know how much it raises the temperature of the river [during high water], but I'm sure that when the river goes down, it still pulls out the same amount and it warms [the river] to some degree. (*Richland County Recreationalist*)

My biggest concern is...[a] dam. It's a wild river. It needs to stay a wild river because it's one of the last ones....If there were wild rivers across the United States, then it would be no big deal. But when this is one of the last, if not *the* last, then that's different. If it is the last, then we need to keep it just because it is the last....That is my biggest concern. (*Richland County Recreationalist*)

Especially among the participants from Dawson County, few were without comment concerning the diversion dam at Intake and the issues regarding the Pallid sturgeon. No one argued for removal of the dam as its importance to agriculture was noted across interest groups. Local conversations did not reflect angst regarding the need to do something to aide the survival of the Pallid sturgeon, yet they question the estimated expenditures:

From my understanding, and you have to understand I'm not an expert on this, you can keep the dam, keep the irrigation and canal the way it is, but the fish need to have an alternate route to get over the dam. (*Dawson County Recreationalist*)

It seems like they have gotten a little too much emphasis on the endangered species part. I don't want the Pallid sturgeon to disappear, but I don't know how much money we can spend on it. I don't know that they can do a whole lot about it. I don't feel that they should let other fisheries go because they want to spend so much time on the endangered species. (*Dawson County Recreationalist*)

I think the numbers that have been thrown out are really exaggerated. I don't remember what they claim end up going up the canal. There...[aren't] that many fish in that whole area...to substantiate those kinds of numbers. (*Dawson County Recreationalist*)

The changes they're going to make, like I said, spend millions of dollars...they could haul them in a limousine...you know, what I'm saying? It's just crazy. It's ridiculous, and with the amount they're talking, you could give each one a limousine ride up there every day for a long time. (*McKenzie County, ND Agriculturalist*)

The biggest problem here is the diversion dam. They are having a big controversy over the Pallid sturgeon. It is an endangered species...and they are talking about a fish bridge for the sturgeon to be able to go up river....There are some conservationists that would like the dam to go away, but they rely on the dam for irrigation....Intake doesn't allow the fish to move upstream and spawn where they need to....And Pallid sturgeon and sauger get sucked into the canal....They are trying to get big fish screens in front of the canal so the fish can't get into the canal....Another plan is to have a lift station that would fill the canal....If those two plans don't work, they plan on digging this huge canal. For them to do that, they would have to run a canal that was 60 feet deep....Logistically, it is such a mess....It seems the fish ladder is more cost-effective....You'd have to have some pretty impressive infrastructure, ice gates and tree gates to keep the junk out of the canal,...and you would have to have a tremendous amount of dirt and...an easement and...bridges....I just can't see it being very feasible. I look at the map and it seems the river doesn't drop that much. (*Dawson County Residentialist*)

There are no structures on this stretch of the river, other than where our diversion dam is at Intake, Montana. And people get kind of the wrong impression of what a diversion dam is. [Initially, it was] just a wood structure. The water would flow over it, and it just kept the elevation of the river behind it about four feet higher than below it. Over the years, because of the ice jamming...that would push...down. Well, [the ice] kind of messed up the dam a little bit. So, what we've been doing is putting rock in there. So when you look at the diversion it's kind of like a rapids would be in a small creek. But, it's in a river situation, and it holds the water high enough to go into our [irrigation project]. It's all gravity flow. We have no pumps so we don't have to worry about using electricity and things like that. (*McKenzie County, ND Local Civic Leader*)

The Intake Diversion Dam...keeps the paddlefish from going too far upstream. Our paddlefish season is very productive. They have now limited it to 1000 fish caught, or six weeks. The last two years, the season has lasted seven days and ten days. That is because they can go down to the dam and snag them, and haul them out. (*Dawson County Local Civic Leader*)

This little diversion dam is what they're looking at....They want to go down the river about 900 feet, and they want to concrete across and place huge boulders in there, which they feel [should be made of] granite, or something. And, then they think that these fish would go up there, and then rest, and then go on up. They don't know if it will work, but they're willing to spend \$60 million to find out....And we're hoping that they have their funding in place to get this thing done. The Corps was just here...and the main thing is the Pallid sturgeon in this area. They want to make sure it can get up over the dam. (*McKenzie County, ND Local Civic Leader*)

[My friend has] been spending a lot of time studying those [Pallid sturgeon], and...he told us there are no young ones because they're not going past Intake [to] spawn.....They're a tough species to re-populate because they're old [when they spawn]. Some of those Pallid sturgeons might be 60- or 70-years-old. So, you can plant babies, but you don't know if it will do any good for a long time. (*Dawson County Recreationalist*)

The main thing is, I'd hate to see them tamper too much with our irrigation project. It's worked for approaching 100 years now, and it'd be nice to keep it going. It really doesn't have a great adverse [effect] on anything, or anybody, as near as I can tell. It's probably an inconvenience with this Pallid sturgeon, or for someone coming down in a canoe or a boat, but it's not a huge inconvenience. (*McKenzie County, ND Agriculturalist*)

It's so stupid. Most of the pallids can jump and keep going above the dam. But, it's like 50 million dollars they are going to end up spending because it's got to be an inch of lift per 100 feet, or something, so that the Pallid sturgeon can get above them. Then, they are going to make us put an eight million dollar stand-still screen in front of our canal. Did you know we're killing 80 million fish a year in this canal?...God, wouldn't you think it would stink around here? It's not that bad. I don't know where these people come up with these numbers. Yeah, there's probably a lot of fish that come up here, that go right back into the river. I don't know. But we're going to spend a lot of money down there. That's really stupid. It doesn't need to be done. And we're trying to get this project privatized. (*Richland County Agriculturalist*)

Economic Growth—Anticipating Little, No Development Worries

Many people in the segment are concerned about the economic viability of their communities. The current oil and gas boom is adding to the local economies, but many people assume this is a temporary improvement and are worried about the long term:

In ten years, if something doesn't come in to make this community thrive, I look at it becoming a senior citizens' center. The community is aging. All of the young people are leaving....In ten years, if energy doesn't open this country up with oil or coal, it will just be trying to survive. (*Dawson County Local Civic Leader*)

Between here and Terry, there are probably eight or ten houses built, primarily, with a good view of the river. There are a few south of Glendive, and then there is my place and a few more houses....From Terry to Miles City, there is almost nothing... It is amazing how few houses are built for a view of the river....[In] other parts of the country there would be a whole line of houses. (*Dawson County Recreationalist*)

Among agriculturalists there is a sense of impending decline:

It is the 'too' country—too dry, too wet, too windy, too cold, too hot. It is always too much of something. We never have an average year. We have averages on the Internet that will tell you, 'Wow, that is a pretty nice average temperature,' but you will never see that temperature. I guess it is an extreme country. It has a lot of extremes. (*Prairie County Local Civic Leader*)

I've already told my son that he'll be going to college and that I'll be the last generation farmer. I won't put him through that. It's too tough, way too tough. I mean, you already see the decline of farmers. It's sad....I mean, unless something changes,...you can't make it. You just can't. It's a struggle....We'll rent out....Some days, I wish that I wasn't here but there's that dedication thing in there. (*Richland County Agriculturalist*)

Around here, everybody leaves; there isn't much to do. I don't blame them if they can get a job where they can work eight hours a day. You have to like this to stay here. I don't know what it is going to be like....Some of this land is selling for so much money. There are places worth \$100,000, and people are paying two million dollars for it. A lot of people buy it, and come out for two weeks to hunt, and leave it [to] sit [for] the rest of the year....Up west, they are buying all their places, and now the people from the west are coming down here, and they are making this stuff higher. I don't know what is going to happen. (*Dawson County Agriculturalist*)

In Glendive, local officials blame the restrictions and complications regarding federal flood plain requirements for the lack of economic development in their town:

The Army Corps holds the key to a lot of future development in Glendive. You might have noticed a dike that was built in Glendive back in the '50s to prevent high water and flooding on that side of the river....Unfortunately...[the Corps says we are] vulnerable to flooding and high water.... Because of our problem with the dike, and the 100-year flood plain, they are allowing no building, no additions, no anything, on the west side of the river....It is handicapping Glendive. For the community of Glendive, solving our flood plain issue is our number one priority. (*Dawson County Local Civic Leader*)

We are hampered....In 1959, when they built the dike, they did all the studies and said, 'This is a 100-year flood plain dike, and you are not going to have any more problems.' Then they...later said, '[O]ops, we are doing stuff a little different than we did, and now it looks like it would need to be elevated to be a 100-year flood plain'....We have some land below [the dike] that would make good housing places. Our K-Mart store would like to add on, and they cannot. And, McDonalds is sitting in the flood plain....There are fifty-some businesses sitting there, not so many houses....We are going to have to get out of that bowl, [and go] along the Sidney highway, or east up on the Belfry Flats, or someplace. We are going to have to get away from the river to come up with some subdivisions. And, it is not only places for people to live; it is someplace for an industrial park, someplace for a grocery store....Because...if we had a flood, there would not be any groceries in Glendive. (*Dawson County Local Civic Leader*)

Some foresee a future when there will be an influx of people and property near the river will be highly-sought-after:

Riverfront property will receive great premiums over what it will ever [earn through] agricultural uses,....even some of the big cattle ranches. There are people [with] ranching operations up in Belgrade and Bozeman who are selling those [ranches] for development, and then they are turning around and investing that money in some good-sized ranches in this half of the state....It is not just Western Montanans, it is also [money from] out-of-staters...coming in. (*Richland County Local Civic Leader*)

People want to come here because of the solitude. (*McKenzie County, ND Local Civic Leader*)

I have seen a major change in ownership along the river. We [now] have private landowners with a lot of money....[They are] buying up large tracts of land....Across the river we have a big shooting club. They have a big lodge over there, and they've tied up a lot of land that they own and lease. So, we've got different people now controlling what's going on, and the focus isn't farming; it's on recreation....If your focus isn't being a rancher, you're going to lease it to

somebody...maximize dollars, then get the heck out....Well, that's state-wide. Everyone wants to get to the water....Access is going to be a major problem. (*Richland County Local Civic Leader*)

Oh, yeah, it's coming. It's going to come. There's a lot of people in the big cities that aren't going to stay there forever and where else are you going to go? Who has places like this? Not that growth is *going* to be here. (*Richland County Residentialist*)

The lady down the street knows that someday someone will buy her double lot and build...a show place, or a mansion....[Her house is] not a great house; it is a small one, and the lots along the river are beginning to be prime property. The value of it is really going up....I guess, that's progression....In ten years, if the economy keeps up, and the housing market stays like it is...I anticipate that some of the older homes will be torn down and bigger ones, nicer ones, [will be] put in. (*Dawson County Residentialist*)

For the most part, however, residential development along the river is not viewed as a major concern. Locals consider the potential for ice jams to cause flooding and other problems as very plausible threats that will rather naturally deter development:

The thing about flooding [is] it's usually done though in the springtime with the ice flows. So, what happens is, you will end up with damage done by the ice chunks....They will sheer off a [power] pole,...[and] you can have a chunk of ice that's as big as the room we're sitting in...[that] will just [bull]doze right through a road, or whatever. So, you have those types of things with the flooding. (*McKenzie County, ND Local Civic Leader*)

It is amazing to see the ice breaking up in the spring. It is really a sight to see the chunks of ice that go along the banks. It used to be everybody would run down to the bridge to watch these huge chunks breaking up and going up on the shore. (*Prairie County Recreationalist*)

You should have heard [the ice] when it broke in the night. It was so big and thick, and it would clash and bang together. It was kind of frightening, really. We would go out on the old bridge...[and] watch ice go under it. You'd feel it shaking, and we sat up most of the night. It would come up pretty close to the banks. (*Dawson County Residentialist*)

It'd be nice if they'd keep the river flowing a little more, if possible. But it probably won't happen. [The river] ends up getting so ungodly low in August, you know. And then, that's how them sand bars start forming. And the silt. And then, if we do get flooded, it's a bad thing to have them sand bars out there. The ice packs up against them, and if the ice can't move...that's how the flooding occurs. If the ice can keep moving, you'd never have [a] flood. But the ice starts

building up on those sandbars, and then it's just like putting a board in, and then it comes over the banks. (*Richland County Agriculturalist*)

We haven't had a flood since 1959, [but] we called an evacuation in 1984. Our problem is usually spring ice melt. If it does go over the dike, we will lose life and property. (*Dawson County Local Civic Leader*)

The issue we deal with is ice jams...[and] it jams in a different spot every time. There are three or four different problem areas that create the jamming. Then you get the flooding as a result of it. Not much you can do about it. (*Richland County Local Civic Leader*)

Additionally, locals explicitly view building in the flood plain a foolish act:

I've had a lot of people say, 'We'd better have some rules and regulations along this river....Aren't you afraid that people are going to start building right on the river bank?' Well, no. That river, itself, will take care of that problem. I've lived here all my life, and ice chunks and water will destroy a house very fast.... [Y]ou'd have to construct a sort of levy around your house because it just floods every so often. (*McKenzie County, ND Local Civic Leader*)

We have city lots that go right down to the riverfront, but, on most of those, people have stopped development of their property several hundred feet from the bank. That area [by the river] isn't used a lot; it is mostly for [the] aesthetic view....People are nervous about when the next ice jam is coming through. People in Montana are smart. We don't build on unstable ground....I understand that up west, by Livingston and Big Timber, that people are thinking they need their back porch right on the river. They don't do that here. (*Dawson County Local Civic Leader*)

As far as a residential house, if the guy wants to build it there, ok, it's his land. Build it. But I don't think he should be allowed to say, 'I'm going to armor the riverbank'....[And], like I said, nobody does that around here, because it floods. But, I know that further up the river that's done all the time. And [on the] lower river too. You go down below Bismarck, North Dakota [and] there are a lot of big homes built right on the river. And they're all rock and everything....It's beautiful. But let's say something happens, and it washes...[those] people away. Then, to me, too bad. I mean, that's the way we should look at it. (*McKenzie County, ND Local Civic Leader*)

[In Sidney], we differ from all the other towns along the interstate where they build on the river. We're set back a mile and a half away from the river, which has been a positive thing...[because] flooding just effects the farmland or farm houses, not the town. (*Richland County Local Civic Leader*)

I always thought that any damn fool who wants to build on the river bank, sticking his neck out, if he falls in—tough shit-ski. He should know better. It's

like those guys in California that build up on a mudslide; they ought to know better. (*Prairie County Residentialist*)

People know that river [will flood],...that is why we didn't look for a house over there....I grew up seeing that whole area under water. So, I know what that river can do. I wasn't about to buy a house over there. Now, those stores have been built over there, but we wouldn't buy a house over there. (*Dawson County Residentialist*)

People are starting to buy property along the river, but I think people are smart enough not to build in the flood plain. (*Dawson County Residentialist*)

Once you get below the bridge, you have agriculture land. We get floods, but [you don't leave] anything of any value...down in the meadow. I have seen...[water] cover the whole thing. It is kind of scary, but kind of neat. (*Dawson County Residentialist*)

You would be stupid to build on the flood plain...Down here nobody is going to develop in the flood plain because they have seen what can happen. (*Dawson County Residentialist*)

They can build where...they want to. But, if they get flooded, that's their problem....If you want to be stupid enough to go down there on a sandbar, don't come crying to me....When they buy these little parcels,...it should be right on their deeds that this property is floodable....If they would have studied it, they wouldn't have built there to start with....Take the liability off me....You'd have to be a damned fool to build a house on a place like that to start with. (*Richland County Residentialist*)

Several participants explain that flood plain regulations combined with geographic luck keeps people safe:

The way the bank is situated, it tends to flood further south or on the other side. (*Richland County Residentialist*)

We've got these flood plain regulations that'll take care of it, if they're enforced. (*Prairie County Residentialist*)

Well, that is in the flood plain. They knew that when they built. They put that little bit of a dike up, and they think that is going to hold....[I've seen the river] almost go over the road when it gets really high. (*Dawson County Residentialist*)

I am almost positive that we are not in the flood area. Although, one spring it did almost come over the bank....It was that far from...running over the bank. It will probably happen again one of these years. (*Dawson County Residentialist*)

Thoughts on Erosion and Rip-rap

With regard to bank erosion, opinions vary in terms of the magnitude of the problem. Rip-rap is a known solution, but many note the potential for shifting the problem of erosion elsewhere when using this remedy. One local action, bank sloping, has been used to mitigate against erosion. Descriptions of both natural erosion processes and the potential for human activities to cause erosion are voiced among participants from all of the interest groups, although there are varying degrees of agreement as to whether or not erosion is a problem. Among residential participants, some expressed the view that erosion occurs slowly and thus is not an immediate problem:

Erosion is a natural phenomena of that river....When the river's high, it runs up against that high bank, and when it soaks it up,...[the bank] gets so saturated that it tips in. That's just the way it works....I've seen a lot of farmers lose ten, thirty, forty, fifty acres. (*McKenzie County, ND Local Civic Leader*)

It's almost a natural...[thing] because that's what the river does. (*Richland County Recreationalist*)

[The course of the river] is always...changing....[It] could change drastically from one year to the next. Every year, it's a change. (*Richland County Recreationalist*)

When this dam was put across, it changed the course of the river, and this guy lost about 140 acres of land. (*Dawson County Local Civic Leader*)

Taking a look at the entire river is the right way to go. Sometimes you can make individual changes, and you are not really sure of the effects up or down river. I know we have a channel that has changed three times in the last fifty or sixty years. It goes from one side of the island to the other. There has to be something upstream causing it to do that....For example, when the state highway department built the interstate bridge down here, we developed an island that had never been there before. I am sure they had no clue that was going to happen. (*Dawson County Local Civic Leader*)

In recent years, on the Yellowstone, it hasn't been quite so bad. [In the past] the water was meandering so bad we had to relocate actual roads. So, then we had to get into the Corps of Engineers, and do the rip-rapping thing, and all that. I think in the last 20 years we haven't had to deal with much of that, but in the past it was a major issue. (*Richland County Local Civic Leader*)

One of my concerns is the river has a tendency to make its own way where it wants to go. (*Richland County Agriculturalist*)

I noticed that the river has probably come in 100 feet, and I've lost property down here. I have the river coming in, and it's sort of making another channel. It's taken

quite a little property, the erosion. But I haven't got any qualms about that. I know living here that we're going to have to put up with some of that. (*Dawson County Agriculturalist*)

Erosion of the river is probably the biggest problem we have with the river. (*Richland County Agriculturalist*)

I don't see erosion as a major problem at all. (*Dawson County Recreationalist*)

We don't really have erosion issues. (*Prairie County Recreationalist*)

Problems? I don't see any problems along the river. It does change a lot. I mean, the channels change, in fact, because of the problem of the river eating away at the banks. (*Richland County Recreationalist*)

If it is destroying somebody's livelihood, acres of some farmland, probably it should be controlled. But, where it is just a natural state, I don't think so. It's really hard to say because I don't own land down by the river. So, to me it's not a problem. But, to people who own land along the river, I am sure it is. (*Richland County Recreationalist*)

On my place there is a big meander, and it is starting to cut right across there. It wants to form a sandbar here. Maybe, in 100 years or 200 years it will go right across here. (*Dawson County Residentialist*)

The changing of the channel, at least in the areas that I have looked at, has been so infinitesimal. There's no way in the world, unless we get a tremendous deluge like the forty-day rain, that the river could change enough to do any actual damage....You'll find a farm in an aerial photograph, or you'll find a piece of land that came to one farm when it was taken off the other side....The biggest one is near the town of Savage. The river changed channels there, probably 150 years ago. It moved about half a mile. (*Prairie County Residentialist*)

The Yellowstone River hasn't changed much since it formed. It isn't like the Missouri that can cut 400 to 500 yards out of a bank in a year. You don't see that here. (*Richland County Residentialist*)

Rip-rap is regarded as a solution for erosion problems, but it is a solution that can cause problems downstream.

I think they get concerned [about erosion] and do stuff for it. I know some people put in rip-rap....If it is going to control the soil, then good. I might be speaking out of turn, but that is the way I look at it. (*Prairie County Residentialist*)

It seems they have places where [the city] dumps concrete, and I am sure that is for erosion....I think it serves a purpose. It gives them a place to put the concrete, and it doesn't look bad. (*Dawson County Residentialist*)

There isn't too much to do about [erosion]....They piled debris from the old high school right here on the riverbank and that is what protected our riverbank. It stays...permanent[ly], and when the water comes down, it keeps it out. (*Dawson County Residentialist*)

We do have erosion. This riverbank, where you noticed all the brush, if we hadn't been putting [brush] over that bank for thirty to forty years, that bank would be over here in the middle of the street. [The brush] stops the erosion....They will have to do something about the bank, down here. [With] another big, heavy rain...it is going to wash it out. (*Dawson County Residentialist*)

I think it has been said that you are not supposed to use rip-rap. At one time we rip-rapped a lot of our river....I think you can use concrete, but it cannot have any steel in it anymore. (*Prairie County Local Civic Leader*)

About four years ago we moved the road....Once [the river] decides to change course, it just keeps hammering on you until it wins. There are no cheap tricks....One project we did with the Corps was to armor 500 feet of bank...The feds were kicking in 30 percent, and it still cost us \$170,000 to do those little short pieces....So, [with] a typical road, we relocate it. We're not talking paving, [but if] it's all gravel...probably, we can move a road for \$80,000 per mile. (*Richland County Local Civic Leader*)

Erosion is constant....It is influenced by runoff from the mountains....[And,] with this soil composition here,...you can see where this basin has stretched. [The river] wants to travel. People built close to the water, and now they are trying to armor the river to keep it from traveling, and it is a [lost] cause....The problem is, if [we address erosion] here, we're affecting everything downstream. They have learned that...small changes on this river cause major changes downstream....We have a bridge out here that [the river] flowed straight through the piers. It now flows [parallel] to the bridge. Minor changes have had major effects on that river....You can't control this river....One year, this guy lost 600 feet of agriculture land. (*Dawson County Local Civic Leader*)

You would have to dump a lot [of rip-rap] to make any difference on the Yellowstone. Loads and loads of it would not make any difference. (*Prairie County Local Civic Leader*)

You'll see a lot of places along the bank where they're putting rip-rap and taking big chunks of concrete or rocks and throwing them along the bank to keep it from eroding. That's fine with me, I guess. How else you could you protect it? I don't know what they could do. (*Dawson County Recreationalist*)

I've seen several guys in the past put in rip-rap. The way to do it, right, would be to go in with big rock....Some people used to put in metal and cables, years ago, [but] they haven't done that in a long time because that's just an accident waiting to happen....You get that sharp metal sticking up, and then it might wash out, and then someone comes [along] pulling a skier and they get snagged up on it. That's not good. (*Richland County Recreationalist*)

Everything along the river has been affected by erosion because it's either cutting or adding to, you know. Well, see, it's always trying to slow itself down....I think, as we make it straighter, we're going to create another problem, where it's just going to keep going down, down, down, and it'll keep getting deeper. Then it will fill up Lake Sacagawea with all the silt. That's what I think will happen if we all got our way and we ended up lining our banks with concrete, we'd end up having to dredge the river. (*Richland County Agriculturalist*)

I sit on the Conservation Board and [locals] come to us wanting to get 310 permits so that they can stop the river from cutting away their land....No one ever talks about the river as eroding away because somebody is doing this or that. (*Richland County Agriculturalist*)

It cuts into one side, and it changes the [bank] across the river. For every action there seems to be a reaction. (*Dawson County Agriculturalist*)

I have seen a number of rip-rap problems. The irrigation project did it to keep from losing ditches. If you happen to be on the other side of the river you say,...'I wish you wouldn't do that.' (*Prairie County Agriculturalist*)

If somebody had done that on the other side, I would be mad because why [should they] push it over to my side? (*McKenzie County, ND Agriculturalist*)

Instead of rip-rapping, another local option was employed a number of years ago. In this case bank sloping was combined with planting trees and willows to stabilize the bank. Locals view this as an effective option:

Through the Conservation District, we have tried to build some receding banks and put willows in, and stuff to stop the erosion. We've had a couple successes with that instead of material rip-rap....[We] back-slope and get vegetation growing in there....If you start washing the banks out, then you've got these big cottonwood trees ready to wash out. (*Dawson County Agriculturalist*)

They...laid all the rocks along the banks, kind of sloped it so it would be no problem. (*McKenzie County, ND Agriculturalist*)

I know of a spot down here, close to the state line, where years ago they tapered the bank down, sloped it and put gravel down on it, and had trees grow. And it's stabilized it pretty well. (*McKenzie County, ND Agriculturalist*)

A few people discussed the need to consider carefully the effects of development along the river:

Of course, bank erosion is important to us on the river....In the future, some kind of control of building on the riverbank [and] in the flood plain [will be needed]. (*McKenzie County, ND Agriculturalist*)

The first thing I've got to get across to them is they've got to stop the erosion on the river. The second thing...I've got to make them understand [is that] I'm not against the wildlife--I'm for the wildlife. Farmers try to keep the water clean... [by] not putting [in] pesticides and fertilizers, [and] we like to see the wildlife. I like birds and...everything, but there does have to be a balance, and the farmer is feeding the people. (*Dawson County Agriculturalist*)

Probably not too much in this area, but [when] you get up west, close to the mountains, they have a tendency to build their houses right on [the river]. The deck is right there, where you could probably cast a fishing pole right in. And I'm thinking a lot of the septic systems have a tendency to cause some pollution [by] being too close [to the river]. But here the flood plain is wider, and if you try to build on there, you're going to get wet eventually. (*Richland County Agriculturalist*)

The conversations reviewed here suggest a timeless quality to the area from the Powder River to the Missouri River. The agricultural roots and rural values of the community permeate the topics of concern and the tenor of their discussions. The conversations suggest that locals are generally willing to work together to solve problems. Even though many locals see that changing ownerships and management strategies are causing changes in local uses of the river, the apparent difficulties with economic growth and the lack of residential development along the river's edge allow many to assume that major change is not imminent, that human effects on the river are minimal, and that management of the river is not especially needed.

Missouri River to Powder River: Agricultural Interest Group Overview

Twenty-two interviews were conducted with individuals representing agricultural interests, including farmers and ranchers. Participants were recruited from referrals provided by the local Conservation Districts, the Yellowstone River Conservation District Council and the Montana Office of Natural Resources Conservation Service.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|---|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Missouri River to Powder River: Agricultural Analysis

I. Specifics of an Agricultural Perspective

A. Lifestyle and Way-of-Life

I just like living here. The best thing about this country is there's nobody here....It's just being able to do something without people around you all the time, you know. Like, when you're traveling, or in the cities, [and] you want to turn around but there's always a car coming, there's always someone. You get out on these roads, and go. You got to look, but it's just something not having someone watch you all the time, just being able to be a little more of a free spirit....It's just nice to be able to do what you want. You want to take a leak? You do whatever you want to do. (*McKenzie County, ND Agriculturalist*)

Occasionally, you'll see boats. That's always kind of a highlight when you're down there hanging out, to see a boat or a raft go by. You wave; they wave back. (*Prairie County Agriculturalist*)

Irrigation, yeah, about every eight hours you got to be out there. All summer. You hardly get a day off, ever. It's dedication, man. (*Richland County Agriculturalist*)

It's a climate where you haven't got people watching every move you make. You know, all of a sudden, you can only spread manure on Tuesdays, and that's in the afternoon after five....[We] don't have that here. We have a lot of open space. (*Richland County Agriculturalist*)

[Because of] the Intake Project, the Lower Yellowstone Irrigation Project, all of the livestock...and hay [are produced]....It's the Ag industry that is greatly dependent on the river. (*Richland County Agriculturalist*)

It's a whole different way of farming....A lady come here one time, she was doing crop reports. And she was a dryland lady...and she said, 'Boy, I used to think you guys were out here trying to wear that ground out, you go over it so many times in the fall.' ...[W]e're getting it smooth. Flood irrigation runs from this end, to that end. You have to have it pretty smooth. She said, 'Boy, I can see why you guys do that now.' Having been around a little bit, [she was] realizing that water won't go up hill. It goes down. (*Dawson County Agriculturalist*)

I think the guys that own the riverfront are good stewards of the land around it, they take care of it. I don't see that any of them abuse any of that. (*Richland County Agriculturalist*)

I wish some days that I wasn't here, but there's that dedication thing....It gets in your blood. It gets in your blood, and it's like everything else, you've been doing it for so long....I remember irrigating when I was seven years old. You know, little boots, and all of a sudden, it's just like it's a way of life....Once you get to my age, forty-years-old, you're...scared to go out there. And who's going to hire a forty-year-old farmer? (*Richland County Agriculturalist*)

Farming hasn't been that good the last few years. [The other day] I said, 'Why didn't I work for the railroad forty years ago instead of farming?'....Chances are wheat would have been eight dollars a bushel, and sugar beets eighty dollars a ton, and land would have been selling for 5,000 dollars an acre. And I would have said, 'Why did I go to work for the railroad?' It was fun when it was small, family farming—that's how we started out. The wife and I had a few sheep and pigs. It worked. It was fun. Raised the kids, [and had] a lot of fun. Now, since all the chemicals, and [farms] had to be so big, otherwise you couldn't afford to buy the equipment; it's no fun anymore. (*McKenzie County, ND Agriculturalist*)

We like the area. We like the conditions that we live in. You don't have to worry when you go to bed; you can leave your doors unlocked. (*Dawson County Agriculturalist*)

B. Land Should be Productive

The Army Corps of Engineers does a pretty good job, I think they take a common sense approach. You know, you can't just do nothing....Look in Europe, they never just let their rivers do anything. I mean, they harnessed them and used them. I think that we ought to use the river more, for hydroelectric power, or whatever. (*Richland County Agriculturalist*)

Without the river, without irrigation, the farm wouldn't do anything. (*Richland County Agriculturalist*)

If we can't get to the water, there is nothing left. The irrigation is where all the economic development is. (*Prairie County Agriculturalist*)

We're getting more of an influx of city people that want to recreate, and we're not making any more land, but we're getting more people that use it. (*Richland County Agriculturalist*)

I don't think we've affected it any. I think we've tried to maintain it. There's very little difference from when Lewis and Clark came through here. (*Richland County Agriculturalist*)

I think everybody is getting along pretty well, because I know that their livelihood is here. There's just so much water in the canal, everybody has got to share....It's the nature of the guys, I guess. (*Dawson County Agriculturalist*)

Farmers need somebody like the Soil Conservation to...[raise] their voice for them because farmers are kind of a radical bunch, and farmers don't have time for the PR. (*Dawson County Agriculturalist*)

I believe that the American consumer doesn't understand where their food comes from, really. We think we can keep importing. We are going to get it from the cheapest place we can. One day, the American food supply will be like the Russian situation is today if we don't quit it. (*Prairie County Agriculturalist*)

It's used for barge traffic...[but] why should Montana lose [its] water when it's Montana's water to start with? There should be more control left to the states to control their own water. (*Dawson County Agriculturalist*)

I think the people that abuse the river are the Highway Department and the railroad. They do whatever they want. See, they don't have to come to the Conservation District and get a 310 to do anything on the river....They just go. (*Richland County Agriculturalist*)

C. Individual Rights are Important

That's what worries me about these studies [is that with] too many people studying things, and pretty soon they study it to death. They decide what I'm doing is bad, and then somebody in Washington will decide, 'Well, you can't let him do that.' You're jumping through stuff all the time. (*Dawson County Agriculturalist*)

It seems like it becomes not your property, anymore. It's other people's business. (*Richland County Agriculturalist*)

I'd say, keep the control about the same....Government is good, but too much government is not good. (*Richland County Agriculturalist*)

The Intake Water Company, I'm not real fond of. They get away with a lot of stuff that the rest of us couldn't, like the deal where they can just pile rock upon rock to raise the water. That's what they've always done, but I don't know what the restriction is. If a bunch of silt came in, and I wanted to push it back in the river, I think I could push one or two or three yards without a permit. They're putting in way more than that every year. I shouldn't talk them down because they may be my ally in this thing. (*Dawson County Agriculturalist*)

I realize there needs to be a certain amount of oversight. Nobody wants to turn it into a sewer....This Heritage River initiative they tried, it looked like it was a good thing, awhile back. Anytime there [are] government purse strings, the money sounds good to these towns along the river. But, there are too many restrictions. They make it sound like there weren't any, but pretty soon there would be strings attached to it. If the government could just not get any more involved than they have been, then it would be fine. (*Dawson County Agriculturalist*)

If [only] government would get out of agriculture, and leave us alone, and let us do our thing....Just get out of agriculture. There are so many rules and regulations coming down that the farmers themselves don't have time to put up with all of that... I think every state should do their own thing. (*Dawson County Agriculturalist*)

You know it gives farmers a bad name when you constantly keep asking [the federal government for assistance]. Wait until you have a bona fide problem, you know....And, the sad part is, the federal government is going to end up paying for this because some environmental group thinks that this needs to happen, but it's just a waste of taxpayer money to do that. (*Richland County Agriculturalist*)

D. State Management Techniques are Questioned

The government will wind up with it, or somebody will end up with it....It's just taking it away from the private individuals. And we're going to just keep losing. (*Dawson County Agriculturalist*)

They fooled with the river...[when] they put the jetties in, and that stuff. You'd think now that they fooled with Mother Nature, somebody should be committed to keep it from washing....They should...[see] to it that it don't wash....If [the jetties] were put there, they should have been maintained....I've had it stuck in the back of my mind, but I don't know who a guy would see [to have it looked into]. The Corps of Engineers? (*McKenzie County, ND Agriculturalist*)

E. Outsiders Have Obvious Wealth and Different Values

Well, we're getting more people. A lot of people are moving out of the west and buying land down here because they can sell their house and everything up there and buy cheaper down this way. (*Richland County Agriculturalist*)

The other things I see when someone from the outside comes in, they post their land. If they are from the city, they don't want anyone on their land. They want to run all over and hunt on your land, but they won't let you on theirs. (*Prairie County Agriculturalist*)

A lot of people think they know what's best, but they really don't....Like Bobby Kennedy's kids. They're always champions for the little guy when none of them have any idea how the little guy lives. They've always had a silver spoon in their mouth. I think a lot of these people who are wealthy, from California or New York, they think everything is easily fixed by keeping cows out and doing all that kind of stuff. I just don't think they know. I think there's a lot of money there, and I think that's what drives them. I think a lot of people are too well-off, and they don't have anything else to do but come up with ways to save things. Of course, I sound like an old-timer, there. (*Dawson County Agriculturalist*)

You always hear these horror stories about these western characters that come in from California, and stuff. And, they'll drain a creek and make a little pond. They don't even [show any] regard their neighbor downstream. (*Dawson County Agriculturalist*)

It is like...they are trying to get rid of the farmers and ranchers. We are giving all of our food away. They want to take Montana and make it a park, or something. Some of them people back east haven't a clue what goes on back here. To me, it is just one step at a time. They are trying to take you over....If everybody could get together, which we can't....If we could all get together from Texas, to Montana, to back east....But, hell, you can't even get that many people in this county together for some reason. (*Dawson County Agriculturalist*)

The non-residents, they're more sarcastic, I guess, about hunting. And they wonder why they don't get to hunt when you turn them down. (*Dawson County Agriculturalist*)

I'm an outsider. We've been here since 1971, and we're still outsiders. (*Prairie County Agriculturalist*)

II. *Agricultural Descriptions of the River*

A. *Yellowstone River is Big, Powerful and Abundant*

They tried raising sugar beets in the '20s and '30s [with water] from the Milk River, and it would dry up in July and August. This one has never dried up. We went through several years when it never rained at all, and there was still water to irrigate. We never wanted for water. (*Richland County Agriculturalist*)

Of course, we like [the river] for our irrigation project, which has really been good. And it's one of the best water supplies in the United States for irrigation water....We have never been out of water here, on our project. Even in the dry years, and as low as the river has been, we have always had a supply of water. So that's one thing I like about it. (*McKenzie County, ND Agriculturalist*)

It supplies our way of life, by having irrigation here. (*Dawson County Agriculturalist*)

So, the river probably isn't as important to a lot of people because they can recreate with all of these other things. And the river, here, is too large to...float....I think you could die because the trees are in the river [and] you can't see them, and then you get flopped over, and then you get caught. And we've lost a lot of people, you know, swimming in the river. Not many boating accidents anymore. It's just dangerous. It's dangerous, so people don't recreate. The time you see people go down to the river is, like, August, and the river is way down. That's a different recreational activity – agate picking. (*Richland County Agriculturalist*)

When it's high, it scares me, but in the summertime, it's nice. It's kind of a slow meandering kind of a deal. It's nice to be there. I don't think about it that much, being

around it all the time, it just seems like it's there....I think it was in '93, a kid fell in the river up here at Intake and drowned. I was thinking about him when we were down there. It was a really high water spring that year, too. It was just kind of creepy. There's a lot of power there when it's high. It makes me a little uneasy. (*Dawson County Agriculturalist*)

I guess it's just kind of an untamed river that no one has really messed with. We respect the river. It has a really strong undercurrent, and even as children we were raised along the river, and you were taught to respect the river. There are too many drownings. (*Prairie County Agriculturalist*)

One of my concerns is the river has a tendency to make its own way where it wants to go. (*Richland County Agriculturalist*)

I noticed that the river has probably come in one-hundred feet, and I've lost property down here. I have the river coming in, and it's sort of making another channel. It's taken quite a little property, the erosion. But I haven't got any qualms about that. I know living here that we're going to have to put up with some of that. (*Dawson County Agriculturalist*)

Erosion of the river is probably the biggest problem we have with the river. (*Richland County Agriculturalist*)

B. Ambivalent Sentiments about the River's Character

It's just beautiful. It's like a huge greenhouse, basically. You know everything is green, and everything is clean. You know, we really take pride in this valley. (*McKenzie Country, ND Agriculturalist*)

The Yellowstone's just nice. It just flows, and it don't bother nobody. It's a gentle river until it floods, then it gets pretty mighty. But, in general, yeah, god, I think I could sit down there and just watch it. I love being next to the river. It's just nice. Spring of the year is really nice. I mean, if I had more time. And, that's the thing, you know, people ask me, 'How's the river doing?'...They just look at me and ask, 'Don't you go down to the river?' Hardly ever. I drive by it, that's it. Too busy. It's kind of sad because a guy could really enjoy it, but I don't. Almost take advantage of it, because that's where our water comes from. (*Richland County Agriculturalist*)

Well, it's probably the best part of the United States. Probably one of the best rivers in the United States....The brush, and the trees, and the things along the river that...I grew up with....I guess, I take them for granted, maybe. But, it's the best part of the river, you know. (*Dawson County Agriculturalist*)

I'd describe it as pretty likeable surroundings. Of course, I take the river for granted, probably. But, at the same token, I've always enjoyed having it there, and I don't feel that I've abused it. (*Richland County Agriculturalist*)

I guess you look around, and you hear what's going on. Where there is a shortage of water, you feel blessed to have the river flowing by, here. You go down there some early morning, when the sun goes up, and you look over, and it's later on in the summertime, it's nice and peaceful down there. You see the deer coming up to drink, swans, beavers....Not everybody gets to see....I've been here long enough, I kind of take it for granted. (*McKenzie County, ND Agriculturalist*)

For me, the river is just nice to look at. And, in the fall of the year, I drive too slow because I'm always looking, watching the trees change. And there were times I drove too fast [because] I was looking at trees changing. And then, I looked in the rear view mirror and I saw these flashing lights....When he comes up, he says, 'You're going too fast.' And, I said, 'Where did you come from?' He said, 'I met you, didn't you see me?' I said, 'No, I was *in the fall*.'.... The trees are beautiful along the river about that time. When the ash are starting to turn gold, and the cottonwood are still green, and then you got the yellows, and I was just...gawking. (*Richland County Agriculturalist*)

This meandering river. (*Dawson County Agriculturalist*)

It's a mild-mannered beast. (*Richland County Agriculturalist*)

Well, the Yellowstone is the only free-flowing river left in this country. (*Richland County Agriculturalist*)

We get hurt the worst in the drought times. (*Richland County Agriculturalist*)

I guess there're no real advantages, just the scenic. Other than that, it's kind of a detriment because, you know, you got to be a little more careful around it. It does flood. The year I built this house, there was water on three sides of it. (*McKenzie County, ND Agriculturalist*)

III. Living with the Yellowstone River

A. Flooding, Ice Jams and the Power of the River

When it gets high, it starts taking banks away. When it floods, it can be pretty bad. It leaves all kinds of trash. It can be really bad with big trees, rocks, willows, and all kinds of sticks. In 1978, it was the worst flood I remember. From here, all the way down there, it left seven feet of ice. After that all melted, you should have seen the mess. (*Dawson County Agriculturalist*)

We've never lost any land....The river doesn't actually start coming over its banks and rushing through. What happens is, through all the irrigation system, the drain systems, it comes back in through the drains and just, basically, comes up. There's no current where we get flooded, so it doesn't take the land or anything. It's just water there, and it goes down, and you're left with the debris. (*Richland County Agriculturalist*)

It'd be nice if they'd keep the river flowing a little more, if possible. But it probably won't happen. [The river] ends up getting so ungodly low in August, you know. And then, that's how them sand bars start forming. And the silt. And then, if we do get flooded, it's a bad thing to have them sand bars out there. The ice packs up against them, and if the ice can't move...that's how the flooding occurs. If the ice can keep moving, you'd never have [a] flood. But the ice starts building up on those sandbars, and then it's just like putting a board in, and then it comes over the banks. (*Richland County Agriculturalist*)

B. Yellowtail Dam

Since Yellowtail has been in... I think we've had a lot less erosion. Yellowtail is controlling the spring runoff. (*Richland County Agriculturalist*)

I think they open the gates at the wrong time. They open the gates during the high-water mark, which half of May, and all of June. And that adds to the flooding that takes place along the river. And, of course, the guys...that have river land continue to lose it because of the high-water washing action... It's a major disaster when it happens. What happens is, the river will freeze low, and they'll continue to keep adding more water out of Yellowtail. When they dump it, it keeps adding layers, the river is already full, and so the sloughs fill up. (*Dawson County Agriculturalist*)

IV. Controlling the River with Rip-rap

A. Rip-rap Seems to Work in Some Places

When Grandpa was actively farming we had this one spot that would always want to erode. And, he'd just go get cement, or iron, or anything—just a bunch of junk car bodies and throw it in there—and it'd stop....You have got to have something solid, like concrete, or lay down a bunch of rebar...to where it isn't going to move. I don't really know what the answer is, but I know that's just we'd do. Grandpa would say, 'Go get the cement, and put it in that hole that always washes.' It, really, never did get any worse. (*Richland County Agriculturalist*)

I am not the expert, but I have lived here, and I have seen the river do some strange things. It may work for a few years if you do it right, but you could get a bad year, and it will wash it all out. (*Dawson County Agriculturalist*)

This one contractor was taking out houses and stumps, so he asked me whether he could bring these foundations down here along the river. But, pretty soon [others started bringing] junk and trash....I couldn't be down there all the time. Signs didn't do...[any] good. So, I got after it, and I cleaned it up, and burned all that I could. And then put all the cement on the edge, and that part works. (*McKenzie County, ND Agriculturalist*)

Yes, if it's my property we're losing, yes [we should be allowed to control erosion]. (*Richland County Agriculturalist*)

They say that these bank stabilization projects aren't real good. I think that's the way it's always been, that's fine with me. As long as I can get my water, I don't care. (*Dawson County Agriculturalist*)

B. Rip-Rap and the Potential for Shifting the Problem of Erosion Elsewhere

Everything along the river has been affected by erosion because it's either cutting or adding to, you know. Well, see, it's always trying to slow itself down....I think, as we make it straighter, we're going to create another problem, where it's just going to keep going down, down, down, and it'll keep getting deeper. Then it will fill up Lake Sacagawea with all the silt. That's what I think will happen if we all got our way and we ended up lining our banks with concrete, we'd end up having to dredge the river. (*Richland County Agriculturalist*)

I sit on the Conservation Board and [locals] come to us wanting to get 310 permits so that they can stop the river from cutting away their land....No one ever talks about the river as eroding away because somebody is doing this or that. (*Richland County Agriculturalist*)

It cuts into one side, and it changes the [bank] across the river. For every action there seems to be a reaction. (*Dawson County Agriculturalist*)

I have seen a number of rip-rap problems. The irrigation project did it to keep from losing ditches. If you happen to be on the other side of the river you say,...'I wish you wouldn't do that.' (*Prairie County Agriculturalist*)

If somebody had done that on the other side, I would be mad because why [should they] push it over to my side? (*McKenzie County, ND Agriculturalist*)

When you look at [this] bridge, there's twenty feet of silt built up there. If it isn't there, it's going to be in the dam. If it isn't [in the dam] it's going to be in the Missouri, or the Mississippi. That's why I believe in rip-rap to stabilize the banks. I believe in rock jetties. But if you put a rock jetty on one side, you've got to stabilize it on the other side....And, if you don't stop it, then it just eats, and then it starts meandering on the other side. (*Dawson County Agriculturalist*)

C. Rip-Rap and Difficulties Getting Permits

I think the rules and regulations are pretty stringent about placing concrete along side of the river bank. (*Dawson County Agriculturalist*)

Rip-rap [is]...probably, really expensive, and I imagine the permission would be hard to get. (*Dawson County Agriculturalist*)

D. *Rip-Rap is Costly and Few Can Afford It at an Effective Scale*

What we call the June rise is going to erode...somewhere. And, if it ever gets started on a piece of bank that's more sandy, or more silty, then it will erode it faster. But over the years, what you lose on one side, you gain on another side. It's really not stoppable. As far as monetary-wise, you can't afford to do anything with it. (*Dawson County Agriculturalist*)

It's a good idea, everybody likes it, but who's going to stand the expense to put it in? We feel that it should be the Corps of Engineers because they seem to have the say so. (*Dawson County Agriculturalist*)

I'd still like to see them do some rip-rapping, or something....Get some of these jail birds out here, make them pick rock, make them earn their meals. (*McKenzie County, ND Agriculturalist*)

E. *Rip-rap and the Question of Aesthetics*

I don't know if there should be some rip-rap that should go in there....You don't want it to look ugly from the river....It's just an eyesore, it just looks bad. (*Prairie County Agriculturalist*)

F. *Other Techniques of Bank Stabilization: Sloping*

Through the Conservation District, we have tried to build some receding banks and put willows in, and stuff to stop the erosion. We've had a couple successes with that instead of material rip-rap....[We] back-slope and get vegetation growing in there....If you start washing the banks out, then you've got these big cottonwood trees ready to wash out. (*Dawson County Agriculturalist*)

They...laid all the rocks along the banks, kind of sloped it so it would be no problem. (*McKenzie County, ND Agriculturalist*)

I know of a spot down here, close to the state line, where years ago they tapered the bank down, sloped it and put gravel down on it, and had trees grow. And it's stabilized it pretty well. (*McKenzie County, ND Agriculturalist*)

The jetty is a quicker solution. It doesn't take as much rock or cement. (*Prairie County Agriculturalist*)

About 1970, on the southeast corner of my farm and the neighbor's farm, they back sloped the riverbank, because at that time, the riverbank was straight up and down probably as high as this ceiling or higher, and it was eroding and cutting into the land. I don't know exactly if it is through the Corps of Engineers, but our irrigation project [did] the work, and they back sloped about a mile and a half of this river. This was probably thirty-five years ago, and it's worked well. Where they stopped, if they could have gone

another mile or a mile and a half farther west, they would have saved a lot of ground. (*McKenzie County, ND Agriculturalist*)

Yeah, in irrigation we have weirs. They turn out a little more water than we can handle, so that's the only weirs I know of. (*Dawson County Agriculturalist*)

In the '70s, the government...wanted to stop the erosion. So they hauled rocks out and they made them jetties. Just dumped rocks out in the river, and diverted it to go over to the other side....They made some steel jacks, probably ten to twelve feet high, that kind of crisscrossed it....They had a cable through it, and had the cable buried with a dead-weight in the bank, and that [would] catch trash....[Trash] would build up and wouldn't wash. It was pretty stupid if you think about it. They had several of them. One year, they were still there, and after the second or third year, when the ice came, it just ripped it all off, and tore it to pieces. It did work a little bit, but it didn't last. (*McKenzie County, ND Agriculturalist*)

The best way to fix the erosion is to slope the bank and put rocks on it, or cement, or stuff on it. I've done a stretch of it, probably 500 to 600 feet, and it doesn't budge. But down in front of the jetty, and behind the jetty, where they had one of these rock piles, they've been kind of washed off, too. They're not as severe now as when they first put them out...but they kind of make the water go out and circle. So that creates wash, too, in the back of it, and that's what happening by my place. (*McKenzie County, ND Agriculturalist*)

V. Public Demand for Access is More and More Problematic

A. Abiding by the "Old School" Rules of Accommodation

If anybody ever comes and asks us, we say, 'Go ahead, just don't leave a mess.' ... And most people are very good. (*Richland County Agriculturalist*)

I very seldom ever turn down an agate picker or a fisherman, if it's somebody I know. And if they drop...beer cans or something, they just don't get to come back in. (*Richland County Agriculturalist*)

We've never stopped anybody who wants to come down and fish. People go down and hunt. They ask, and we'll let them. (*Dawson County Agriculturalist*)

There is lots of wildlife. That is what is good about the river. There are a lot of people that want to hunt. I let a lot of people go, but I don't like to let too many. So they know where each other are. There are a lot of guys that go fishing and agate hunting. (*Dawson County Agriculturalist*)

This neighbor over here, if you ask him, he'll let you go. But he wants you to come ask him. (*McKenzie County, ND Agriculturalist*)

I let them all on, as long as they behave themselves. (*Dawson County Agriculturalist*)

I'm not a fisherman, but I go down there and sit with them, have a beer with them. Last time...he had a bunch of hot sausage steaks. He gave me a bunch of them. Boy, were they hot! That's why he was drinking beer. (*McKenzie County, ND Agriculturalist*)

The first weekend of paddlefishing we drove on the ditch bank, and we just counted—there were seventeen or eighteen campers, vehicles and stuff sitting down there on my land. One person asked. And I mean, they drive two-hundred to three-hundred miles, [then] just drive down there and camp. I drive down there and visit them. Some of them have [come] back [for] several years. They bring their friends down and just camp there. I've been fortunate. They leave it nice and clean, no mess. So I can't complain. In fact, from Bozeman, five to six years ago, two young couples, came in a car, they put up a tent and went paddlefishing. They came and asked. They stopped by the door and left a note. It rained that night, and they got out of here in a hurry....Anyway, they got their paddlefish, and about a week later they sent a picture with a paddlefish and thanked us for letting them come down there. It all washes out. If they treat you right, you treat them right. (*McKenzie County, ND Agriculturalist*)

If they respect your property, you've got to respect them, too. (*McKenzie County, ND Agriculturalist*)

If something happens down there, who is responsible? That's the one thing that scares me. If something would happen there, say a car rolled over the bank on top of somebody, or somebody drowned, I don't know who would be responsible. If they...[have] the right lawyer, they can make you look guilty, I suppose. (*McKenzie County, ND Agriculturalist*)

The locals, my neighbors, ask permission. Other people don't, and that's where I have a problem. I may have to put up some 'No Trespassing' signs, or 'No Hunting or Fishing Without Permission' because...somebody told me the other day,...if I wanted to call the game warden down there to talk to somebody, and I didn't have it posted, he couldn't go do it. (*McKenzie County, ND Agriculturalist*)

B. Access and Abuses

The fishermen come, and they bring their whole family, and they get bored, and they start rolling rocks [from rip-rap] in the river. I have had them...cut off [the willows] because they were in the way of their fishing poles. That was in the days before I was in Block Management. (*Prairie County Agriculturalist*)

Some girl ran over my irrigation pipe, and she got stuck. I wouldn't have known [she damaged the pipe] if she hadn't gotten stuck. She will never go down there again. (*Dawson County Agriculturalist*)

There's just too many that don't realize how good it is until they've got it destroyed... For instance, public accesses, boy, they've just had hundreds of people there all the time.

Well, first thing you know, there isn't all the vegetation along the banks and stuff. It's all gone....They just, more or less, trample everything down, and it winds up kind of a disaster...If you're...letting somebody come in,...as many as they wanted to, then that wouldn't work. They don't take care of it. Some will take care of it. Some of them won't. First thing, you know, you've got just a big mess. If you're talking about public access that Fish and Game might build,...that really isn't happening too good either....Fish and Game don't want to take care of some of the things that they have. (*Dawson County Agriculturalist*)

There's getting to be a lot of boating along the river, and that isn't too bad if they take care of it. But they kind of infringe on private property. Some of the people that have access below the high water mark seem to want to use more than that....And then we have problems with the boating...and then the hunters. They'll come in up the river and sneak in on you where they're not wanted. (*Dawson County Agriculturalist*)

In regards to the Fish and Game, all we ever got here were more game wardens. I think the Fish and Game presence will probably be more common. (*Richland County Agriculturalist*)

People have more time, I guess, and more money to spend. Once you let one guy in, there's talk around, [and then] this guy wants to hunt, and that guy wants to hunt, and after a while, it gets to be a nuisance. (*Dawson County Agriculturalist*)

The recreationists [are] going to have to slow down the environmentalists so everybody can use it. You know, get some good use out of it. (*Dawson County Agriculturalist*)

It's the landowners against the access people. The ones that want the access don't own any place. (*Richland County Agriculturalist*)

I guess, unless you have paid for it, you know that you don't own it. (*Richland County Agriculturalist*)

C. Denying Access: Avoiding Abuses and Liabilities

Our neighbor down here has all kinds of signs, 'No Hunting,' 'No Fishing,' and 'No Trespassing.' I never do that. And he gets pretty hostile down there; he's a little weird. (*McKenzie County, ND Agriculturalist*)

D. Access as a Benefit to Agriculturalists: Block Management

I do allow hunting, and I am in Block Management. I just signed a new three-year contract. I like the Block Management. [Hunters] have to sign up, and I know who is on my property. The money I get out of it, I probably actually spend...policing it....It does let me know who is here. Ninety-five percent of the people are happy with it, especially the out-of-staters. (*Prairie County Agriculturalist*)

There are a certain percentage of people that think they should have the right, and they don't have to ask. I hope we don't legislate this thing, because in my thought process, it is taking away my property rights. I don't own the river, but I do own up to it. (*Prairie County Agriculturalist*)

Their name is on that piece of paper. I don't just put a box out. I make them come to my property. There are a lot of people that paddlefish there. North Dakota starts a week or two before Montana. My fishing thing is not really under Block Management, but I use my forms to regulate it. The game warden knows that. I don't get paid for that. But they have signed their names, and they have given their license numbers and descriptions. The people that ask me don't give me any trouble....The Block Management is a deal that allows a relationship between the landowner and the public. (*Prairie County Agriculturalist*)

Actually, when we signed up for Block Management, all of a sudden, we got a better quality hunter – the next day. So I don't know what it was...[but it seems] you get people that are serious hunters [and] that don't want to trash your property. (*Richland County Agriculturalist*)

We don't fight the sportsman. I guess we encourage them to come in and hunt because I don't want to be overrun with deer. Every time you let the deer overrun you, it just seems like they get Bluetongue, or some disease that kills them by the thousands. So we actually belong to Block Management and encourage the hunters to come in....The Fish and Game put us together. And, then, they pay us so much a hunter a day. And I think that was proactive, but I also think that was a blessing to the Montana Fish and Wildlife because if you're going to sell a license, you better give the guy a place to hunt, right? (*Richland County Agriculturalist*)

They're getting us to do [Block Management] for pennies compared to [how] a lot of this land is outfitted....But I don't want to have to police that stuff. And you know, to be honest with you, I don't want to have to kiss some rich person's ass to come out here and hunt. I'm not going to open beers for them. I'm not going to cook steaks for them. I'm not going to put them up....[and] I'm not going to get the deer for you. You shoot it, you deal with it....If I wanted to run a hotel, I'd have went to Billings, and I'd be running the Sheraton, or, you know, some fancy hotel. (*Richland County Agriculturalist*)

VI. *Life-forms of the River*

A. *Wildlife*

We like it down where we live. We have turkeys down in there, and they come up right on our lawn. I got a picture of a tom right on our lawn. Then the deer are up there. And the coyotes are howling. It's quiet....We're at the end of the world, you know. (*McKenzie County, ND Agriculturalist*)

Deer, pheasants, [and] we've had a few antelope here. Fox, raccoons, skunks, weasels. I know there are bobcats down there...[and] there's supposed to be mountain lions in the area. Haven't run into them, yet. I hope we don't! (*Prairie County Agriculturalist*)

I guess the problems would be too many deer, too many geese, too many people want to use the river without permission, and things like this. (*Dawson County Agriculturalist*)

Fish used to be able to go up in the creeks and spawn. The beavers got it all dammed up, and the [fish] can't get up the creeks....The ones that can [get eaten by pelicans.] The pelicans fly up [the creek], and then they float all the way back to the river, and then they just get up and go back up [the creek] again. (*Richland County Agriculturalist*)

[Have you had any problems living so close to the river?] Mosquitoes. (*Prairie County Agriculturalist*)

B. Cottonwoods

Those old cottonwoods started toppling. When a cottonwood topples, the roots stay there, and [the top] falls down. That current hits it, and it's just like a cutting torch. It cuts back into the bank. We'd have probably been five acres ahead if we had run over there with chainsaws and cut the trees down. (*Prairie County Agriculturalist*)

Now, the cottonwood trees are a hindrance for erosion because when the water gets in there...close enough, then they tip into the river. They take a lot of bank....Plus, they open up another hole for the water to get in. So, normally, if you're really going to manage the river good on some of these places, you go and cut down those trees ahead of time so there's no tops to them, [and] all you [have are] the bottoms. (*Dawson County Agriculturalist*)

C. Exotic Invasive Plants- Noxious Weeds

This salt cedar, or Tamarisk, or whatever it is.... You lose your willows when that stuff comes up. It's not a vegetation that's edible for wildlife or anything, so you're going to lose in every respect....And that's what's going to be some of our biggest problems in the next few years. (*Dawson County Agriculturalist*)

Well, you eradicate it every year. And then, when the river comes back up and washes the seed back in, you start all over again. (*Dawson County Agriculturalist*)

We brought our buck sheep over there, and they pretty-much eliminated the spurge. They did a better job than the spraying did, without costing \$743 a year. So, it makes sense in the flood plain, because any place the ice has jumped out on the bank, you just walk through and see spurge seed sitting there. (*Prairie County Agriculturalist*)

D. Pallid Sturgeon

The main thing is, I'd hate to see them tamper too much with our irrigation project. It's worked for approaching a hundred years now, and it'd be nice to keep it going. It really doesn't have a great adverse affect on anything, or anybody, as near as I can tell. It's probably an inconvenience with this Pallid sturgeon, or for someone coming down in a canoe or a boat, but it's not a huge inconvenience. (*McKenzie County, ND Agriculturalist*)

It's so stupid. Most of the pallids can jump and keep going above the dam. But, it's like fifty-million dollars they are going to end up spending because it's got to be an inch of lift per one-hundred feet, or something, so that the Pallid sturgeon can get above them. Then, they are going to make us put an eight-million dollar stand-still screen in front of our canal. Did you know we're killing 80 million fish a year in this canal? We're killing them, yeah. God, wouldn't you think it would stink around here? It's not that bad. I don't know where these people come up with these numbers. Yeah, there's probably a lot of fish that come up here, that go right back into the river. I don't know. But we're going to spend a lot of money down there. That's really stupid. It doesn't need to be done. And we're trying to get this project privatized. (*Richland County Agriculturalist*)

The changes they're going to make, like I said, spend millions of dollars...they could haul them in a limousine...you know, what I'm saying? It's just crazy. It's ridiculous, and with the amount they're talking, you could give each one a limousine ride up there every day for a long time. (*McKenzie County, ND Agriculturalist*)

Oh, I think...there's a push to get rid of the Intake Dam, which is not really a dam. It slows the water down so it can come in the canal. Well, they want to do away with that, and that would be impossible because those farmers can't afford to pay for a pumping project when this is gravity flow. And, there's some talk of building the ditch further up, to where it would be free-flowing [for] about three miles. There again, this is to aid the paddlefish in getting up stream, which I think the dams been here since 1905, and paddlefish seem to be thriving because they caught their 1000 fish when the water was up, really quick. They got, like, three hundred the last day, I think. (*Richland County Agriculturalist*)

I guess there's talk that they'd like to have the diversion dam out, just so people can boat over, or canoe over it, or whatever,...which would [mean we will have to] pump the water, or something, instead of using the diversion dam to raise the level [so the water can] come down our irrigation canal. Which would be crazy, as far as I'm concerned. Well, most of the guys who want to do that are environmentalists. [They] are worried about the environment, so they want to spend who knows how much electricity pumping this water that flows naturally. They're really deep thinkers. It would make the electricity come; I don't know where from. It would take burning coal, or something, to make it. (*McKenzie County, ND Agriculturalist*)

There's so much trash coming down the river, [the new screen required for the Intake Diversion Dam] will just clog up, and we're not going to have near as much water down the canal as before, where it's just free-flowing right now. I think that's going to be huge....That's why we're almost going to be...forced into pivots, where we're going to need only a third of the water. And a lot of people are talking maybe that's the thing to do....We don't think [the pivots] put enough water down on beets, but maybe in the valley where we got good sub-soil moisture they might work. (*Richland County Agriculturalist*)

Now, some things are supposed to go extinct if they can't make it. Now, the regular sturgeon—that isn't a Pallid sturgeon—they're making it fine. But the Pallid sturgeon doesn't seem to....I don't think they're going to make it, regardless of what they do. I think they're a species that's going to go extinct. And I don't think that will hurt anything. [You] can't save everything. (*Richland County Agriculturalist*)

They're afraid, now, that it's too steep, or that the rapids are too rough there, and the sturgeon can't get over it. They want sturgeon above it, so they're going to spend millions of dollars and re-do that into some kind of a stair-step thing that they think the sturgeon will be able to get over....I suppose whoever's trying to save these Pallid sturgeons,...I suppose the Corps, would have to do the work. I don't know who'd pay, or how that works, but it's going to happen....Those Pallid sturgeon, if they wanted, they could be grown in captivity. They'd hatch them out and seed millions of them. They could haul a few truckloads above the dam and see if they liked it there. What I'm saying is, there's not any reason to throw that kind of money at that diversion dam for sturgeon. Of course, I'm a little hard about those things, anyhow. Those kinds of things become extinct all the time. They have forever, always will, and it just so happens these sturgeon survived longer than some of them. They're a prehistoric animal, that old sturgeon, and maybe [their] time has just run out. (*McKenzie County, ND Agriculturalist*)

You have to wonder about the Pallid sturgeon. You kind of wonder if that is as serious as they say it is. It probably is. It could be a way for them to shut you down, 'You can't pump there because the Pallid sturgeon are in there and you're going to suck them all up and kill them.' (*Dawson County Agriculturalist*)

E. Corridor and Riparian Zone

[It's] where the deer, geese, [and] ducks [live]. I just call it wildlife habitat. It's not a corridor. Corridor, to me, is a runway. (*Dawson County Agriculturalist*)

I don't have any....I know that some guys do have a riparian area. I think just leave these riparian areas alone, and they'll grow back. Don't try to do anything about them; it just hinders their growth. (*Dawson County Agriculturalist*)

To me the corridor of the Yellowstone River is where the river is, but some people got the idea that the corridor is out here, all on the riparian areas, or all in the valley....I think the corridor has to be where the water runs, where you [have] control of the

water....Some people wanted to try to put all the riparian areas in, which includes our farmland....we've got an argument with that....Some of them figure...you can call it a corridor and then turn around and get out on somebody's farm just because the river, maybe a thousand years ago, went there. (*Dawson County Agriculturalist*)

I've heard 'corridor,' ...and I don't know what the actual measurements would be. I've heard they want to establish a corridor five miles from the river in each direction where everything's protected. What a bunch of crap that is! That's what worries people. If they did that, they'd have control of this entire place, and you wouldn't be able to do anything. You hear of these Heritage River deals, where they come along and see a house that you can see from the river, 'Well, you've got to take it down.' They can really shut you down. I think that's what a lot of...[environmentalists] want. And, the really radical ones, they don't care if I'm here or not. They couldn't care less about me, or anybody like me. They'd like to see us gone, actually. They'd like to see a buffalo range, and me in a sustainable village doing something that the government mandates that I do. (*Dawson County Agriculturalist*)

VII. Visions of the Future

A. Visions of Change

I've already told my son that he'll be going to college and that I'll be the last generation farmer. I won't put him through that. It's too tough, way too tough. I mean, you already see the decline of farmers. It's sad....I mean, unless something changes...you can't make it. You just can't. It's a struggle....We'll rent out....Some days, I wish that I wasn't here but there's that dedication thing in there. (*Richland County Agriculturalist*)

In ten years, I foresee that irrigation will be different. There's going to be a lot more conservation as far as water. You're going to see a lot more pivots. I don't think you'll see this [flood] irrigation system like we have, here. I really don't....If everybody had a pivot, and it worked, there would be no drains at all and there'd be very little water coming. I mean, there'd be a third of the water coming down that big canal. (*Richland County Agriculturalist*)

I have wondered, once in a while, about the pivots...that are drawing out of the Yellowstone. How does that affect the water level? (*Prairie County Agriculturalist*)

If they don't keep the private sector along the river [privately] owned,...then we're going to have lots of problems. There's too many people coming in here. The farmers and ranchers, they're the ones that have protected the river from the word go. You know, ever since the Indians left, and the buffalo left, it's been privately owned and taken care of, whether it's yours or whether we're taking care of a State section, or whatever it is. You take care of it because you know you got to make a living off it. It's probably been protected more from private individuals than anything. And, if it keeps going like I'm seeing, with these easements and things along the river, we're going to be in trouble

because people just don't respect it, unless they own part [of] it. (*Dawson County Agriculturalist*)

They will get an easement...[that will] let the people stay there and keep using it. But you can't ever do anything with it. And then some of the easements are for perpetuity. I mean, they're not even thinking about the next generation, or anybody that's coming along. Of course, then they pay people for the easement....It looks like money to them, [and] they can...still keep their place,...[but] you can't pass them on....Nature Conservancy, they're the ones....And, then, there's some...the government will wind up with....It's just taking it away from the private individuals. And we're going to just keep losing.... The easements are going to be our biggest problem, and keeping the Fish and Game from owning too much of it. (*Dawson County Agriculturalist*)

I really don't foresee any changes, really. I guess...they might go away from furrow irrigation. I don't know if that will be [here] in ten years. [I think they will move] to center pivots, you know, or sprinkler systems. (*McKenzie County, ND Agriculturalist*)

I don't think we've seen a conflict, yet, as far as the use of the water. You will down the road. We're seeing more and more irrigation systems put in every year. It used to be flood irrigation, where they flood mainly the valleys, but now they've gone to a sprinkler irrigation system. So now they're irrigating the hills several hundred feet above the river. (*Dawson County Agriculturalist*)

I suppose there could be some oil activity,...[and] if oil stayed here long enough, there might be some people moving in...[who] want to live by [the river]. You know, that's always an attraction, it seems like. (*McKenzie County, ND Agriculturalist*)

Around here, everybody leaves; there isn't much to do. I don't blame them if they can get a job where they can work eight hours a day. You have to like this to stay here. I don't know what it is going to be like....Some of this land is selling for so much money. There are places worth \$100,000, and people are paying two million dollars for it. A lot of people buy it, and come out for two weeks to hunt, and leave it sit the rest of the year....Up west, they are buying all their places, and now the people from the west are coming down here, and they are making this stuff higher. I don't know what is going to happen. (*Dawson County Agriculturalist*)

I think it's going to be tough for [future generations] to make a living as...irrigated farmers. It's hard enough the way it is, let alone looking at the cost of fertilizer and fuel prices today. (*Prairie County Agriculturalist*)

I suppose if [my son], here, was to think about [farming], it would probably take more ground to make a living....He'd be faced with a higher land bill [due to] the people coming in. (*Prairie County Agriculturalist*)

We're changing over to pivot irrigation; we're using less water. In the next ten years, we'll probably irrigate everything with pivots. So we'll use half the water we're using now. Whether it's good or bad, I don't know. (*Dawson County Agriculturalist*)

The environmentalists...don't use common sense. Maybe they think they do, but on a practical end, they're not using common sense....They're wanting to go back to the '30s, but, yet, they still want to drive their car....You've got to conserve your water, you've got to keep the pesticides out of the water....No common sense. [They're] book smart, yes, but [they have] no common sense. (*Dawson County Agriculturalist*)

B. Management Priorities

The first thing I've got to get across to them is they've got to stop the erosion on the river. The second thing...I've got to make them understand [is that] I'm not against the wildlife--I'm for the wildlife. Farmers try to keep the water clean... [by] not putting [in] pesticides and fertilizers, [and] we like to see the wildlife. I like birds and...everything, but there does have to be a balance, and the farmer is feeding the people. (*Dawson County Agriculturalist*)

Probably not too much in this area, but [when] you get up west, close to the mountains, they have a tendency to build their houses right on [the river]. The deck is right there, where you could probably cast a fishing pole right in. And I'm thinking a lot of the septic systems have a tendency to cause some pollution [by] being too close [to the river]. But here the flood plain is wider, and if you try to build on there, you're going to get wet eventually. (*Richland County Agriculturalist*)

Of course, bank erosion is important to us on the river....In the future, some kind of control of building on the riverbank [and] in the flood plain [will be needed]. (*McKenzie County, ND Agriculturalist*)

I was at a meeting, and they said the more open you can be, and the more people you can get involved, the better off you are. Even the environmental ones, not the radical ones but [some],...might see a point to what you're doing if you explain it to them and get them involved. Maybe they won't be so hard to deal with. I think that's true. You can't circle the wagons all the time. If you do, they're going to beat you because they have way more money than you do, and you've got to play ball with them a little. (*Dawson County Agriculturalist*)

Environmentalists...and conservationists look at this system and how we irrigate, [and] they're like, 'No.' You know, we put a lot of fertilizer and a lot of chemical into these beets and grain. And then, of course, we run it through the drain, and the drain system ends up going right back into the river. And, you know, they look at that as... 'so many parts per million of this, so many parts per million of that.' And actually,...it goes through the sand....It's the best filter you can ever find. It's almost cleaner going out of our drain system, I think, than when we get it. (*Richland County Agriculturalist*)

It's the gas wells on the Tongue River and on the Powder River, that are now putting contaminated water in....It might take 20 years, but you're not going to be able to grow anything. They're dumping that into the Yellowstone right now. They've got this water [out of] the ground, they [ought to] put it back in the ground. Just put a disposal well and pump it back....I think they're pretty lax when you've got high energy prices, whether it be natural gas or propane. So I think they look the other way in some instances to reduce the prices by a couple of bucks....Wyoming has several thousand wells that they're already dumping [from]. I understand some of it will be coming into the Powder River Basin, also. Hopefully, they'll get stricter about what they let in the river. (*Dawson County Agriculturalist*)

C. Concerns About Keeping Water In Montana—Reservoirs Might Help

There's a big push to adjudicate the water, which is to figure out how much water we need to keep up here and [how much] the downstream people want....Most of us think that if the downstream people want the water, they'll take it away from us....You've seen that in Arizona, and you've seen that out on the coast where they've shut the irrigation off. When people need to drink, something else is going to get [shut off]....I think we're all getting along pretty good, until the people downstream think they need more water. (*Richland County Agriculturalist*)

I think just keeping water back, like that Yellowtail Dam is the best....We've talked about putting in reservoirs....upstream to hold back some of this water....It's a good idea, everybody likes it, but it's who's going to stand the expense to put it in? We feel that it should be the Corps of Engineers, because they seem to have pretty much the say so....I can't think of anybody who would object, because we [would] have recreation on that reservoir—fishing, boating. (*Dawson County Agriculturalist*)

Down around Scotts Bluff and Mitchell...they irrigate out of reservoirs, but they were out of water. (*Richland County Agriculturalist*)

Missouri River to Powder River: Local Civic Leaders Overview

Fourteen interviews were conducted with individuals holding civic leadership positions, including city mayors, city council members, county commissioners, flood plain managers, city/county planners, and water/wastewater treatment managers. Participants were identified through public records.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|---|--|---|--|---|--|-------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Missouri River to Powder River: Local Civic Leaders Analysis

I. Agriculture is the Priority

A. Farmers are Historic Base and Generally Good for the River

The Lower Yellowstone Irrigation Project...was started in 1906. We actually celebrated our 100th birthday....It's a Federal Bureau of Reclamation project, but it is run by the local people. And it's truly...unique because it straddles the border...So part of it, 66 percent of it is in Montana and 33 percent of it is in North Dakota...[It includes] about 17,000 acres that are in North Dakota, in McKenzie County, and the rest is in Richmond and Dawson counties in Montana. (*McKenzie County, ND Local Civic Leader*)

All along the Yellowstone Valley [there] is irrigation, which involves farmers and ranchers, and the fishing accesses that are coming along now. Mainly, I think it is the agriculture along the Yellowstone Valley that adds a lot to your community. (*Dawson County Local Civic Leader*)

Agriculturally, I would say [the river] is very important, but from the recreation standpoint, maybe not....We do not know what the [number of] floater days are, but [there are] not that many....On a local basis, [people are] fishing for catfish and stuff like that. There is no trout fishing on the river itself. (*Prairie County Local Civic Leader*)

Green and pretty....It is a diverse community. We have farming, we have grazing for cattle, we have irrigated valleys [and] energy production. It is very diversified....It is a wonderfully productive area. It is highly dependent on Mother Nature for what we get out of it. One thing that does make this county more stable, agriculturally speaking, than a lot of others is the Yellowstone River and the ability to irrigate...[because] of it. (*Richland County Local Civic Leader*)

The Yellowstone was very influential with settlers being in the area, initially. Some large cattle and sheep ranches [were established]. Then the railroad went from the western border to the eastern border of Montana. I would say the Yellowstone might be the single most important entity for establishing Glendive, and [it is still] the reason [Glendive] is here today. A lot of small communities have dried up and gone away. Glendive continues to be a lifeline in Eastern Montana because of the river. (*Dawson County Local Civic Leader*)

[The Yellowstone River is] very, very important. It's the only reason that there would be people here....With the water, they can sustain a livelihood, here....We have to have the water to grow. We grow high-value crops, here....The sugar beets need water. [Also] corn, alfalfa, and our grains....Under irrigation you can produce anywhere from 70 to 90

bushels per acre...[compared to] 15 to 20 bushels on dryland. (*McKenzie County, ND Local Civic Leader*)

Mostly, what we do on the Yellowstone as County Commissioners is try and promote the agriculture side of it and to make sure the water is here for irrigation. We really have no control over it, other than writing letters to try and promote the Yellowstone Irrigation Project, or to try and promote recreation. [We write] letters to the Corps of Engineers, or to federal programs to try...[to] support [local agriculture]. (*Richland County Local Civic Leader*)

We irrigate out of the river through the Buffalo Rapids Irrigation District. They are the main supplier of water. There are a few guys that pump their own water out of the river, but the majority of them irrigate through that district....From a production standpoint, there is no comparison....You can get anywhere from four inches of moisture to twenty-four inches of moisture, here, in a year. Four inches is not going to grow very much corn or hay, beets, beans or other crops....Four inches of natural rainfall is not going to cut it....I think corn needs up to twenty-something inches of moisture. (*Prairie County Local Civic Leader*)

We've farmed here for a hundred years, right along [the river], and we have not destroyed it with agriculture....Over the 100 years that this thing has been running, we have never run out of water. Never....We've done a lot of conservation things in the project, such as leveling....Some guys went to big pipes instead of having ditches so that the evaporation wasn't so prevalent. Sprinklers now are starting to go and...you have more control over the amount of water....But as soon as you put a sprinkler on, your costs go up, because of the energy costs today. [With flood irrigation] the water that is not used in...some farmer's field...just goes back in the river at some different point. There's a lot of drainage ditches that run back to the river....It's just a really nice system. (*McKenzie County, ND Local Civic Leader*)

We...take care of our farmers....They are going through a little change right now that the federal government stepped in...[and] won't allow [farmers] to put water back into the river. Before, they just flooded it [and ran it back to the river]. And it ran through the feedlots and back into the river. [We] washed all of the chemicals out of the field and back into the river. So we were introducing a lot of things into the river. They are tightening that quite a little bit, now. (*Dawson County Local Civic Leader*)

B. Keep Agriculture as the Priority

I think the main goal of this area would be [to] keep the river usage as it was, as we've been using it. I think it should remain for the agricultural part, you know, the irrigation part. I think the recreational part has been used for years and years, and I think it should remain that way. I don't want to see controls put on the river by any government department....I don't want to see them trying to change the river...for something frivolous. I mean, if it was something that was going to destroy a water intake system I think that's something that's legitimate,...[it] should be protected, because it effects a lot

of people, like in a city....Other than that, I hope people come and enjoy the river,...[that they] realize when it's private property to visit with the owners of the land, and try to be...good stewards. (*McKenzie County, ND Local Civic Leader*)

I think feeding the people of our country is the most important thing, and if we fail to do that we will have a famine in our country. We will save the fish instead of the agriculture. (*Prairie County Local Civic Leader*)

I believe that most of the people that live here believe the same philosophy. And we want to see our river stay the way it is. We...want to make sure that it's used for the [historic] purposes....These dams [support] many thousands of acres of agricultural land....The electrical power was generated [to] set up irrigation pumping power, [but that] has been slowly whittled away from the irrigation projects. I doubt that in the future you'll see any irrigation projects started. I mean, the way it looks to me, there's so many environmental rules, and then...[there's] the cost of power. These electric co-ops that have been using electricity, they get to use it, and if it's not used for irrigation then they get to sell it. This electricity from Fort Peck goes clear to Iowa, Ohio, [and] Indianapolis. (*McKenzie County, ND Local Civic Leader*)

C. We Need Help with Noxious Weeds

The noxious weed program [is] absolutely [important]. We have a multi-county [effort] working on the salt cedar...and leafy spurge. We actually have some spotted knapweed on the river, particularly on the north side of it, now, that is of great concern to us. (*Prairie County Local Civic Leader*)

We manage, [with] three or four other counties,...an extensive program to try and control salt cedar on the Yellowstone....It is a tree that utilizes...more water than is practical....It was originally brought in to help stabilize the river banks, so that we were not losing soils through erosion, but it quickly turned into a noxious weed....It wastes water. It utilizes...more water than is necessary. (*Richland County Local Civic Leader*)

I'm aware of the salt cedar problem, those types of things. And it's easy to observe that the major cottonwood trees are all up to three...[feet] in diameter. You know, there...[are] no small cottonwoods growing. And so, [given] the short lifespan of a cottonwood, there's nothing to replace it. So, what you see...[are] the Russian olives, [and] willows, of course. But I don't see any re-growth [of cottonwoods]....Something has to be done....When you would walk down the stream a quarter of a mile you'll be walking in brush and willows, but all the trees are Russian olive. (*Richland County Local Civic Leader*)

Our weed department is forming an inter-governmental [group]....Anyway, we...[reached an] agreement with three or four other counties, and we got a boat, and we go up and down the river and cut the trees down....[And] we have signs put up, now....We want to make sure people do not transplant them somewhere else. (*Richland County Local Civic Leader*)

We have a huge problem with leafy spurge on the river. They have to try to control it and try to get the landowner to take care of it. Some of it is our responsibility along the river....We are responsible for it, and it is a monstrous thing to take care of. We do not have the funds, so the only way we can take care of it is through special grants. It is all up and down the river. (*Dawson County Local Civic Leader*)

The river, of course, brings all of that [salt] cedar down and spreads it all over. So, it is not just our county. We need to fight everything upstream, too, because if we don't kill it upstream, it just keeps coming down....Salt cedar secretes a poison that kills everything around it. If they don't take care of it upstream, for us to try and control it here is a waste of effort. You have sheep grazing and spraying....They have done some bugs, too....They are finding that with bugs, in some areas, it might work, but around here they have to meet certain conditions. I don't know which ones they are. You could talk to...our weed coordinator. (*Dawson County Local Civic Leader*)

There are areas where that leafy spurge is just rampant. And, if you do not control it, you will lose all of that grazing land....[The farmers] spray in the fields, but around the fields...[they] aren't too concerned because most of their fields are planted and...have crops; but around [the fields there] are...leafy spurge and other noxious weeds, too...[There] is a cost to the landowner, too, because the county really can not afford to eradicate all of it themselves. The...[expense] is huge. (*Dawson County Local Civic Leader*)

The law says the landowner is supposed to be responsible. The problem is, we have irrigation canals that were put in, and who is responsible for those? It comes down, and [even] if it has spurge in the water,...they put it out in their fields....It has to be controlled from upstream, down. It does not do any good to control the downstream because it just keeps coming. (*Dawson County Local Civic Leader*)

D. Eastern Montana

It's Eastern Montana and Western North Dakota, which is plains....We live in a very unique place because the Yellowstone and Missouri Rivers meet right in our valley....We have the water here all the time, and, of course, it's an irrigated valley, with flood irrigation, so it's always green here. Even in the drought years...it's all green and lush. (*McKenzie County, ND Local Civic Leader*)

We're just so involved community-wise. You know everybody. Everybody cares for everybody else in this community. We always said we're going to leave, but where would we go where we'd be as happy? (*Richland County Local Civic Leader*)

The people are really friendly. I grew up here, and it is a great place to grow up, and also a great place for my daughters. It is a friendly community. (*Dawson County Local Civic Leader*)

The people who live here have lived here for a long time. It is their home. A lot of them move away with dreams and then come back because of the people living here in Dawson County, Eastern Montana....My kids both had options to work in other places, and they both chose to stay here because of the friends, atmosphere and the community. (*Dawson County Local Civic Leader*)

What do you mean, planning to stay? I will stay until I pass away. This has been my home, and I'm sure I will be here until they plant me. (*Prairie County Local Civic Leader*)

I am totally planning to stay, too, I guess. We have family and an agricultural business. And, this 'sweet-paying county job,' too. (*Prairie County Local Civic Leader*)

We also have a good community spirit, here....When something needs to be done, everybody gets behind it, and gets it done, whether it's someone who is in trouble with some disease, or somebody needs some help, or accidents. We raise money and try to take care of our own. We are independent, spirited people. We have not been influenced by a great deal of outside, here. Lots of folks in our community are descendents, three or four generations down, of people who were born and raised here. (*Dawson County Local Civic Leader*)

[Our assets are] wide-open spaces, friendly people...[and] a lot of public land for recreation. (*Prairie County Local Civic Leader*)

The thing that brought me back was the security: it's a safe place to raise kids. We have our problems, like everybody else, but [nothing like] drive-by shootings. It is a great place to live and work. (*Dawson County Local Civic Leader*)

II. Economic Growth is Challenging

A. Need For Growth and Development

[We are] trying to promote the area for economic development and trying to bring people back into the community. (*Richland County Local Civic Leader*)

It is the 'too' country—too dry, too wet, too windy, too cold, too hot. It is always too much of something. We never have an average year. We have averages on the Internet that will tell you, 'Wow, that is a pretty nice average temperature,' but you will never see that temperature. I guess it is an extreme country. It has a lot of extremes. (*Prairie County Local Civic Leader*)

It is low in population, which we like....The river is where all our population is. When you get off the river bottom the population gets pretty sparse. (*Richland County Local Civic Leader*)

If we could get one-tenth of one percent of the interstate traffic to stop, we'd be in great shape. (*Prairie County Local Civic Leader*)

[In ten years we will have] a lot of the same stuff. There might be some different crops....A few more people....We have a very good infrastructure,...under-utilized, but very well taken care of....We are trying to get big businesses to come in here, but I don't know if we have it going, yet....[Any change we might see will] not, to any measurable significance, [impact the river]. (*Prairie County Local Civic Leader*)

[Richland County would have water quantity problems] only if we could attract some type of business...that is highly dependent on a large volume of water....And that water might not be coming from the Yellowstone River. It might be coming from aquifers that are below us. (*Richland County Local Civic Leader*)

Even though it might not be used to its fullest extent recreationally, it is a pretty good drawing card for a community. We have talked to a couple of big business[es] about moving here, and we always mention that Terry has an interstate, a rail-line and a big river. So, we can use [the river] as a drawing card for our small community, to, hopefully, entice more people to live out here. (*Prairie County Local Civic Leader*)

I think that the energy thing is our biggest asset....The environmentalists and the...people [in power] need to get together and have a program where we have a safe removal of the coalbed methane. That is a big controversy, and they can't be bull-headed because it is a big asset to our community....Eastern Montana has ten percent of the coal reserve. And we have got to develop it, but we have to be environmentally friendly, within reason, and that is all I can ever see that really can help Glendive grow. (*Dawson County Local Civic Leader*)

B. The River is Big Enough and Mostly Clean

I've never had a call from somebody saying, 'What's the status of the Yellowstone River?'It's there; it will always be there. I'm not that worried about it. (*McKenzie County, ND Local Civic Leader*)

We draw millions of gallons of water out of the river daily. It is our lifeline for the city....We are probably one of the only communities that take water directly out of the river, and we don't worry about getting sick. (*Dawson County Local Civic Leader*)

It rises, and it drops....They have, on occasion, [had to ration], but since we have lived here they have never had to ration water....They did it back in the drought situations—in the late eighties, I think. In Miles City, I know they were rationing water. The only thing that kept the Yellowstone running was Yellowtail. If Yellowtail had not opened it up she would have went dry. (*Prairie County Local Civic Leader*)

The river is very wide at this end because it's the end of the river. That's just what it is. I mean, it's over a mile wide down here...if you went all the way across. (*McKenzie County, ND Local Civic Leader*)

I think one of the biggest issues about the Yellowstone and Missouri Rivers is education about the river. Everybody is talking about huge impacts, and that we are wrecking the rivers, but if you look at the rivers, and see what has really happened, the rivers have dramatically changed for the better in the years. (*Prairie County Local Civic Leader*)

During the times of drought, there are first, second, and third water rights. Third water rights are shut off first. If you have first or second water rights, you still have the ability to get water. And there are times that there is conflict between some of the recreation and irrigation, if the water gets very low....If [irrigators] are pulling water out of the river, and the river is getting too low for a lot of recreation, then we do get some complaints....Some, yes, but...about the only time we get involved is if there is a drought issue. And then, it is just usually a matter of getting the people to sit down, and talk it out, and figure out what is going to happen....In the last couple of years...they seemed to have worked it out themselves. It did not go any farther than a complaint....They worked it out. (*Richland County Local Civic Leader*)

When you have good flow on the rivers, you do not have any problems with who gets to use the water because there is lots of water. Then, all of a sudden, when it gets a little short, the fish need water, and the wildlife need water, and the people need water, and the farmers need water, and there is not enough to go around. In most cases, and I tend to think more and more all the time, agriculture is going to be on the short end of the stick....Oh, yes, we see that up west already....because there is less and less political clout...[as] we have...[fewer and fewer] people in agriculture. That is just the way it goes. (*Prairie County Local Civic Leader*)

[The] Lewis and Clark Power Plant uses the water. And then Sidney Sugars is dependent on [the river] for its water....It is a sugar factory that processes sugar beets into sugar. (*Richland County Local Civic Leader*)

Eventually it gets dammed in North Dakota. It is called the Missouri there, but the Yellowstone supplies most of the water to it. I would not be surprised if it puts in more water. I do not know if they have ever measured it, but there is a lot of water that comes down the Yellowstone. The Yellowstone River, right here, is ten times bigger than the Missouri is at Culbertson... Maybe not ten times,...[but] it is moving a lot faster. A lot more water is coming down the Yellowstone. (*Prairie County Local Civic Leader*)

[I am concerned about] the chemicals that are being dumped from the farming. You know— the herbicides. (*Richland County Local Civic Leader*)

You have a problem with feedlots. People put them on drainage. We are experiencing heavy nitrates in the river, [and] it is people downstream. (*Dawson County Local Civic Leader*)

C. Designated Flood Plains Hamper Growth

The Army Corps holds the key to a lot of future development in Glendive. You might have noticed a dike that was built in Glendive back in the '50s to prevent high water and flooding on that side of the river....Unfortunately...[the Corps says we are] vulnerable to flooding and high water.... Because of our problem with the dike, and the 100-year flood plain, they are allowing no building, no additions, no anything, on the west side of the river....It is handicapping Glendive. For the community of Glendive, solving our flood plain issue is our number one priority. (*Dawson County Local Civic Leader*)

The flood plain is a big issue to us...because so much of our economic development is in that flood plain. Both of our grocery stores are there, [and] there are fifty-some businesses in that flood plain area at this point in time. There can be no more development in that area. It is shut down because we cannot allow anymore construction in the flood plain. (*Dawson County Local Civic Leader*)

The Corps of Engineers pretty much controls all the water. So, they have a big hold over...us as far as what we can do in a flood plain....They have really gotten strict. (*Dawson County Local Civic Leader*)

[The area behind the dike] is a big concern because it is an anchor to our economic development....That is where our businesses have migrated to [and] even our residential area spreads that way. We have spread pretty much as far to the east as we can because of the badlands. So, it is a big concern for our economic development. (*Dawson County Local Civic Leader*)

Several studies have been done along the river to [determine] the flood-way, flood-fringe, [and] all of that. A couple [of] years ago, we had to adopt the last flood plain map as the last, best, version of it....When the county did that, it stopped all development. When we adopted that map, we could no longer allow any development in those areas. The county has a flood plain manager who is also our public works director. (*Dawson County Local Civic Leader*)

About a year ago, we had a company that wanted to add on to their building, and they wanted to get a variance. So the county studied it, and we had to appoint a board to listen to their arguments. And there were several criteria they had to meet in order for us to allow them to go ahead. It had to not be a danger to human life...[and] since it was a manufacturing plant, and there were not people sleeping there on a cot, the board went ahead and gave them that variance. They are still contemplating adding on to their manufacturing plant. (*Dawson County Local Civic Leader*)

We are hampered....In 1959, when they built the dike, they did all the studies and said, 'This is a 100-year flood plain dike, and you are not going to have any more problems.' Then they...later said, 'Oops, we are doing stuff a little different than we did, and now it looks like it would need to be elevated to be a 100-year flood plain'....We have some land below [the dike] that would make good housing places. Our K-Mart store would like

to add on, and they cannot. And, McDonalds is sitting in the flood plain....There are fifty-some businesses sitting there, not so many houses....We are going to have to get out of that bowl, [and go] along the Sidney highway, or east up on the Belfry Flats, or someplace. We are going to have to get away from the river to come up with some subdivisions. And, it is not only places for people to live; it is someplace for an industrial park, someplace for a grocery store....Because...if we had a flood, there would not be any groceries in Glendive. (*Dawson County Local Civic Leader*)

D. Flooding Concerns Usually Associated with Ice Jams

Ice floods [took out the old bridge]. It took that one out down in Fallon, too. It took them both out....Oh, yes, we have our ice jams. That is our main problem here on the Yellowstone River—the ice jams. (*Prairie County Local Civic Leader*)

We haven't had a flood since 1959, [but] we called an evacuation in 1984. Our problem is usually spring ice melt. If it does go over the dike, we will lose life and property. (*Dawson County Local Civic Leader*)

The issue we deal with is ice jams...[and] it jams in a different spot every time. There are three or four different problem areas that create the jamming. Then you get the flooding as a result of it. Not much you can do about it. (*Richland County Local Civic Leader*)

The thing about flooding [is] it's usually done though in the springtime with the ice flows. So, what happens is, you will end up with damage done by the ice chunks....They will sheer off a [power] pole,...[and] you can have a chunk of ice that's as big as the room we're sitting in...[that] will just [bull]doze right through a road, or whatever. So, you have those types of things with the flooding. (*McKenzie County, ND Local Civic Leader*)

That approach to the bridge is nothing but a big dam [when]...the ice jams....The two islands, one in-between the bridges and one past the bridges, never use[d] to be that high. They never had trees and stuff. The last time it [jammed] it...was actually pretty close to running over the dike....They should have had that bridge span that whole area down there....[And,] Marsh Road, out there, would flood almost every year....People on the Marsh Road would get flooded out, and when the flood was gone, then they go back in. They did it for years. To me, that interstate bridge is what started it all. (*Dawson County Local Civic Leader*)

It affects me...because I have a business...just on the other side of the dike, and...we lived in fear, every spring, of something happening. In fact, the year that we moved here was the last year that we had floodwater that way. Because in 1959 they built the dike, and we have been protected ever since, but there is still [some concern]. (*Dawson County Local Civic Leader*)

Yes, we have some flood potential....[The river] has taken out...[irrigation] ditches...[and] fields. (*Richland County Local Civic Leader*)

E. Little Sympathy for Building in the Flood Plain

I've had a lot of people say, 'We'd better have some rules and regulations along this river....Aren't you afraid that people are going to start building right on the river bank?' Well, no. That river, itself, will take care of that problem. I've lived here all my life, and ice chunks and water will destroy a house very fast.... You'd have to construct a sort of levy around your house because it just floods every so often. (*McKenzie County, ND Local Civic Leader*)

We have city lots that go right down to the riverfront, but, on most of those, people have stopped development of their property several hundred feet from the bank. That area [by the river] isn't used a lot; it is mostly for [the] aesthetic view....People are nervous about when the next ice jam is coming through. People in Montana are smart. We don't build on unstable ground....I understand that up west, by Livingston and Big Timber, that people are thinking they need their back porch right on the river. They don't do that here. (*Dawson County Local Civic Leader*)

As far as a residential house, if the guy wants to build it there, ok, it's his land. Build it. But I don't think he should be allowed to say, 'I'm going to armor the riverbank'....[And], like I said, nobody does that around here, because it floods. But, I know that further up the river that's done all the time. And [on the] lower river too. You go down below Bismarck, North Dakota [and] there are a lot of big homes built right on the river. And they're all rock and everything....It's beautiful. But let's say something happens, and it washes...[those] people away. Then, to me, too bad. I mean, that's the way we should look at it. (*McKenzie County, ND Local Civic Leader*)

[In Sidney], we differ from all the other towns along the interstate where they build on the river. We're set back a mile and a half away from the river, which has been a positive thing...[because] flooding just affects the farmland or farm houses, not the town. (*Richland County Local Civic Leader*)

If someone were stupid enough to build on the bank, I don't think we could prevent it if it didn't violate the codes or ordinances. (*Dawson County Local Civic Leader*)

As for flooding...I think...Sidney is pretty safe from that. The only time I've seen some type of flooding is, maybe, down in the lower parts, across the river in the farmland area. In Fairview, it will back up more, there. I don't see any situation or problems [here]. (*Richland County Local Civic Leader*)

F. Flood Plain Maps Can Be Credible

When the Corps built the flood dike, they built it to the current standards, and it is not [now] acceptable as a 100-year flood dike....To raise the dike it would be ten or 12 million dollars....To buy out the property, and demolish everything, and return everything back to the Yellowstone Basin, would be 18 million. You are talking to a community that doesn't have the money. (*Dawson County Local Civic Leader*)

We have been working on [flood plans], off and on, for twelve years....It got pretty hectic because that one time we had a lot of rain, and we had a flood situation, and they wanted insurance. You can't buy flood insurance in this town until we have it tied up with [a] flood plan. And we started working on it....The only thing is, if you are in the flood plain, you have [to meet] certain specifications...in order to get flood insurance. I cannot buy flood insurance for my house,...but anybody can buy insurance...if you have a flood plain plan. Nobody can buy insurance if you don't. But...you can enforce specifications on people if they do build in the flood plain. And some of them are pretty...[strict]—where it is not very feasible to build in the flood plain. (*Prairie County Local Civic Leader*)

It is hard to tell people what to do with their property....We, as a county, never were involved with the flood plain. We didn't want that restriction, [but] in 1998 the government forced flood plain administration on us. It came out of Congress: if you want emergency funds for disasters, you will be in this program. It didn't matter if it...[was] a tornado, or a bridge washed out, they took the stance that said either control your systems on the flood plains, or live without us. We had to get into it....The commissioner's hands were tied. (*Dawson County Local Civic Leader*)

[Building to meet a flood plain plan] is going to be more costly....You have to have much more backfill, and a whole bunch of good stuff....Right now, they would not have to do that, but they could not get any insurance...so it would probably be a benefit to our constituents if we could get a flood plain plan. (*Prairie County Local Civic Leader*)

G. The Practical Limits of Flood Plain Regulations, Especially When Not Enforced

There are already rules by FEMA that say you have to buy flood plain insurance, which means you have to abide by their rules. Enforcement of [the rules] is something important that you have to do. Pierre, South Dakota is a great example in that they let a subdivision build in a flood plain, [and later it] cost...millions of dollars to buy out 300 homes. In Billings, they just kicked some people off the flood plain. It is for the saving of dollars and lives. (*Dawson County Local Civic Leader*)

Even with the federal government's 25 percent match, [to up-grade the dike] was still going to cost us four or five million dollars. And, that is such a tough sell because you are telling somebody who doesn't work at these fifty businesses, or live in these hundred houses, that...[they] are going to have to pay for...a bond to get these people moved out of there or to get something done. And I think with most of these people that would be a pretty tough sell. We have not figured out a way to have the federal government do it all themselves. We have not come up with a plan there. (*Dawson County Local Civic Leader*)

H. Updated Flood Plain and Development Maps Would be Helpful

A couple of weeks ago we were looking at maps on this growth plan. They have these GIS maps, and they are not even...close, especially around Glendive. It doesn't even show what it is [already in Glendive]. (*Dawson County Local Civic Leader*)

How the flood plain[s] themselves are delineated is just based on seat-of-the-pants [guesswork], basically....As you travel the interstate, you can see people are within fifty feet of the bank of the Yellowstone. They can't get close enough, if it was up to them. Yeah, I do have a problem with that...From the planning board perspective,...in general, I guess I agree with setbacks....[But,] just case by case. Someone has to make that judgment [as] part of generalizing to a rule,...[but] the river...varies every quarter [of a] mile....No one could agree on how to word [the rule]. (*Richland County Local Civic Leader*)

III. Natural and Human Causes of Erosion

A. Erosion Impacts Farmers, Roads and Bridges

Erosion is a natural phenomena of that river....When the river's high, it runs up against that high bank, and when it soaks it up,...[the bank] gets so saturated that it tips in. That's just the way it works....I've seen a lot of farmers lose ten, 30, 40, 50 acres. (*McKenzie County, ND Local Civic Leader*)

When this dam was put across, it changed the course of the river, and this guy lost about 140 acres of land. (*Dawson County Local Civic Leader*)

Taking a look at the entire river is the right way to go. Sometimes you can make individual changes, and you are not really sure of the effects up or down river. I know we have a channel that has changed three times in the last 50 or 60 years. It goes from one side of the island to the other. There has to be something upstream causing it to do that....For example, when the state highway department built the interstate bridge down here, we developed an island that had never been there before. I am sure they had no clue that was going to happen. (*Dawson County Local Civic Leader*)

In recent years, on the Yellowstone, it hasn't been quite so bad. [In the past] the water was meandering so bad we had to relocate actual roads. So, then we had to get into the Corps of Engineers, and do the rip-rapping thing, and all that. I think in the last twenty years we haven't had to deal with much of that, but in the past it was a major issue. (*Richland County Local Civic Leader*)

I know it erodes up there by Miles City. The railroad track is always having a time because of the erosion. (*Prairie County Local Civic Leader*)

Here, the river changes a lot. It will move, in 20 years, from one side to the other. It will take up private land, and it will erode 600 to 800 feet of property per year. People on the

other side of the river will acquire property. The river is dynamic. You can't control this river. (*Dawson County Local Civic Leader*)

I guess, directly, we do not deal with [erosion]. We have some tributaries that we have to deal with due to erosion....[W]e have had to do some bank stabilization on [some of our major creeks]....We use rock,...approved rock by the Corps of Engineers....It is all native cottonwoods all along the Yellowstone bank...[and] the root systems help stabilize the banks. (*Richland County Local Civic Leader*)

A local person put a dam across the river so he could get to an island, and you cannot do that anymore. It was done about 40 or 50 years ago....It changed the course of the river. Instead of going around the island, it came through the other way....But, you know, amazingly, the last time I talked to him, the river is changing its course again and going back....That is the only thing that is really a constant—how much that river changes....It just goes where it wants to. It takes off one side for five years, and then it switches and comes back the other way. (*Dawson County Local Civic Leader*)

It all depends on how it dams up or what happens with the spring runoff. That is when the erosion [occurs]. It will jam up one channel, and then the stuff goes out and erodes [in a different spot]. The main area around here is about a 230-mile stretch that is so crooked. (*Dawson County Local Civic Leader*)

We have some erosion. Down below Fallon there is quite a [lot], and right out here at this bridge we are having a problem. It is undercutting the bridge, and we are going to have to extend it way back....But, I think it is...[the] soil condition that we have that creates our erosion....If we don't [do something] it is slowly, but surely, crushing the bridge, and, sooner or later, it is going to have to be fixed....[We should] set the bridge out...[farther]away from the river. (*Prairie County Local Civic Leader*)

They estimated [that] to change the bridge would cost the State of Montana eight or ten million dollars. The city and county would have to contribute one-third of the total cost of the project. The taxpayers would have to come up with it, and that is *if* the Department of Transportation is willing to take out that landfill and put in a bridge. (*Dawson County Local Civic Leader*)

I do not think that we have any roads that we have had to stabilize....[None of them] are...right next to the river. (*Richland County Local Civic Leader*)

I'm sure that this river, in this particular area, is the same as it always have been,...[but] it has changed it's course...at the confluence area. [People] say, 'Oh, wow. Look out the window...and see where Lewis and Clark saw the confluence.' Well, that's not true. The confluence was to the west about three or four miles. The Yellowstone River came down and made a big oxbow,...but with the ice jamming, it finally...worked its way through and cut straight down....So, then I've had people say, 'See, there's a good reason we should have cottonwoods growing along the river.' Which is fine, but I have seen

cottonwoods...ten feet in diameter, that the river takes...[it] and tips...[it] over, and into the river it goes, and off it goes. (*McKenzie County, ND Local Civic Leader*)

My gut tells me...if they look at the entire river, they get a better feel for what [upstream] changes can do [downstream]. I have heard stories about how, all of the sudden the channel changes, taking away a bank upstream, and, all of the sudden a farmer has lost 100-feet of his field. I have, also, heard stories about someone rip-rapping their bank, and pretty soon you have another adverse effect downstream. The natural course of the river has been altered. (*Dawson County Local Civic Leader*)

B. Rip-rap and Protecting Land is Important, But Possibly Futile

People have tried to put in rock jetties because they were trying to save their land. Let's say they put it on the left side of the river. Well,...he didn't think about what effect it had when it went to the other side. So, the guy on the other side says, 'Oh, wait a minute, now mine's starting.' So, he puts one. We can learn from that. There may be ways that we can protect [it], and I really feel that it should be protected,...[but] over the years even those [rock jetties] have been destroyed. (*McKenzie County, ND Local Civic Leader*)

I think it has been said that you are not supposed to use rip-rap. At one time we rip-rapped a lot of our river....I think you can use concrete, but it cannot have any steel in it anymore. (*Prairie County Local Civic Leader*)

About four years ago we moved the road....Once [the river] decides to change course, it just keeps hammering on you until it wins. There are no cheap tricks....One project we did with the Corps was to armor 500 feet of bank...The feds were kicking in 30 percent, and it still cost us \$170,000 to do those little short pieces....So, [with] a typical road, we relocate it. We're not talking paving, [but if] it's all gravel...probably, we can move a road for \$80,000 per mile. (*Richland County Local Civic Leader*)

Erosion is constant....It is influenced by runoff from the mountains....[And,] with this soil composition here,...you can see where this basin has stretched. [The river] wants to travel. People built close to the water, and now they are trying to armor the river to keep it from traveling, and it is a losing cause....The problem is, if [we address erosion] here, we're affecting everything downstream. They have learned that...small changes on this river cause major changes downstream....We have a bridge out here that [the river] flowed straight through the piers. It now flows [parallel] to the bridge. Minor changes have had major effects on that river....You can't control this river....One year, this guy lost 600 feet of agriculture land. (*Dawson County Local Civic Leader*)

You would have to dump a lot [of rip-rap] to make any difference on the Yellowstone. Loads and loads of it would not make any difference. (*Prairie County Local Civic Leader*)

I noticed...up by Miles City, the river was coming in really tough, onto their [railroad] tracks. And they did a lot of work there, and they've got that all lined up. To me, it looks

good. I mean, I don't have a problem with that—it's pleasant to look at. It isn't big, old, massive iron and rock sticking out. It's just nice. It's like a blanket of nice rock. They used a good granite rock...[that] is reddish looking, it blends in with the landscape. That's another thing,...if you're going to do anything, make it pleasant to the eye... because most people, [when] they can look at something camouflaged in there, they won't say a word. But, as soon as you got a big, red, thing sticking out, they'll say, 'What is that? Why is that there?' Same way with irrigation pumps, you know there...[are] pumps up and down this river, and nobody will mess with them. But, [as] soon as somebody's muffler gets loud, they'd say, 'Oh, what is that.' (*McKenzie County, ND Local Civic Leader*)

I think that [we should protect] the infrastructure of the area. Roads are for an irrigational practice [and] we have to have those. (*McKenzie County, ND Local Civic Leader*)

Every time they built a bridge, it always affected the river....There are four now...within a mile stretch of the river....They did rip-rap. They hauled a lot of concrete in there, which helped a lot. But it is so massive to try to stop [the erosion]....We had to make sure all the rebar was out of [the concrete we used]. We have chunks of cement out there that were like two feet deep, maybe eight feet in diameter. They said [chunks of concrete] will float. The water and ice will bring them up....[So, the chunks of concrete] have to be a certain size, and flat, in order for them to pack in there correctly.... The big, long slabs they have to be broken up because the current will actually take them down the river. (*Dawson County Local Civic Leader*)

I don't think those are things that we have any control over. A lot of this is going to be Corps of Engineers, Lower Yellowstone Irrigation, Fish and Game. It is not going to be our problem....We just don't deal much with the river, unless it is a road issue. The only dealing we have had with the river is this boat ramp and, there, we dealt with Fish, Wildlife and Parks. (*Richland County Local Civic Leader*)

C. Timeliness of Permit Process is Questioned

I would like to see us get to the point where we could work better with all the players....You have your environmentalists that say, 'Don't you touch that river. That is a wild, free-flowing river.' But, at some point in time, the people that live along-side the river should have a little bit better say about what happens....If they would allow us to define the course [of the river] better, to do a little bit of work up there, maybe do some more rip-rap,...it seems to me...it would be really helpful....At some point in time, I think, the people's needs should have a little bit more importance than the ducks. Hell, the ducks will land in the river, wherever. (*Dawson County Local Civic Leader*)

Our other problem is that they are understaffed. With this economy, enforcement [of regulations] is not an option....In order to do the enforcement you have to have the tools. It has to work from the top down. You have to have a county attorney that is willing to prosecute. (*Dawson County Local Civic Leader*)

IV. Attentiveness to Local Values

A. Local Values Support Local Control and Local Uses

I think we like to be left alone....Don't come in and try to take it away from us. I have heard some stories from up at Billings where they come in and actually run farmers off the riverbank....The regulations said he could not be on the riverbank even though it was his private land. He could not dump his rocks down there because he was messing up the river. (*Prairie County Local Civic Leader*)

I think the Corps of Engineers has to look at more than just flood control, or flow control....A lot of other secondary things can be [done] when you get that [flood control] done, like irrigation and recreation. Recreation has hardly ever been looked at. Except for the last decade,...they really could not care less. I think there are a lot of things you could do for agriculture and irrigation....like what they have done on the South Platte. You get into the South Platte River and they have done a lot of holding reservoirs, and they fill them in the wintertime and irrigate out of them in the summertime. This is one of the things they wanted to do, [here] but never got it done....[Now] it would not fly. (*Prairie County Local Civic Leader*)

This is a diversified county, and we need diversified use of the river, too. The agriculture, the recreation and the industry—we all need to be able to benefit from the water before it leaves the state. Because once it is down at the floodgates, it is gone. (*Richland County Local Civic Leader*)

I'm hoping that....the people that live [along the river] have [a chance to express]...their options.....I'd rather be sitting at the table when these decisions are made than to have an outsider making decisions. (*McKenzie County, ND Local Civic Leader*)

I do not know if we are going to see as much of the conflict in this area as we will downstream....Right now, they are draining Fort Peck, and Lake Sacagawea and everything, to provide for barge traffic down on the Mississippi....Gambling barges....So, we are getting hurt up here, to benefit whoever down there....Right now, they seem to have the political hammer....The Corps of Engineers....seem[s] to be more influenced by the population down on that end than they are [by those who live] up here. (*Richland County Local Civic Leader*)

We are nothing in [terms of] population base. If somebody runs out of water in a big area, they are going to look at available resources. That scares me. Make sure we keep our valuable assets here. I think we are being looked at as a resource to supply the rest of the nation. If we want to keep this here, my thought was dam it below Fallon and create a huge reservoir. Keep our water here....I hope that they got the adjudication of the Yellowstone rights here. It is important. (*Dawson County Local Civic Leader*)

I do believe that in the future there is going to be more controversy about these user groups coming in and competing for water rights....And, eventually, there is going to be

more of a demand downstream for water from the Yellowstone and Missouri, both. Right now, I think agriculture is probably more important than recreation, and tied to the agriculture are the agriculture-related businesses. And the electrical generator plant. We need that electricity to run the businesses and all of the houses....We are going to need electricity to help with the energy production, too. There are a lot of things that are switching over to electric as far as pumping units and pressure stations. (*Richland County Local Civic Leader*)

B. Environmentalism Not in Tune with Local Needs

That's where the problem lies, it's in this Endangered Species Act....That act, in itself, was designed was to protect some species, and I think it's worked well,...[but] I think the pendulum has swung too far the other way. Right now, the Piping Plover and the Least Tern are two birds that nest on these sandbars out in the rivers. Which is fine, but now we're having people say that ...if we release this water we can scour the vegetation off of those...sandbars. I'm thinking...you've created something different than what naturally would have occurred. (*McKenzie County, ND Local Civic Leader*)

We deal with roads and bridges and those types of issues. And, definitely, in the last 15 or 20 years environmental [concerns have caused a] major role change. Our focus has really changed toward that, and how we do things—storm water protection, runoff issues, disturbances, reclamation [and] sedimentation....The other thing we run into, environmentally, is [when] we want to borrow some dirt for road construction....They have environmental people on staff now that protect the vistas. That popped up for the first time about five years ago....[From the] perspective of a canoe, they didn't want to look up and see some big, old, ugly scar where, before, there wasn't one. Then, the other thing was the traveling public. You don't want to destroy the natural hillside that corresponds with the river. [Now] we have to select different borrow areas so that vistas are protected. [It's] a new wrinkle, and I guess it has some [merit]....I don't know, I had a little trouble with that one, I guess. (*Richland County Local Civic Leader*)

The Yellowstone is one big riparian area....It could be a low-lying area, a hardwood draw, there could be a thousand things they could use that terminology for....BLM uses that term all the time....It is like a big pasture with a little stream running down it. That is the riparian area of a big pasture. I don't think you can use riparian area with the Yellowstone. I think it is its own ecosystem. (*Prairie County Local Civic Leader*)

They are trying to...put stricter mercury emission [standards] in Montana than the national level. If they do get that through, putting more restrictions on it, the companies are not going to come in and develop those natural resources. Natural resources are there for our benefit. Just like the methane down there around Colstrip....They are talking about putting all that salt and stuff into the rivers. Well, I took a tour down there and they showed us that the water they are putting in [the river] is better water than what is naturally washing off into the river from the rain [because] the soil, actually, has so much salt....[They are] saying we should be putting more of that wastewater, from treating the methane, into that river, and it would be a better river. But they are [being] hampered by

environmentalists. And, granted, we need environmentalists, but I think they go too damn far. (*Dawson County Local Civic Leader*)

The environmentalists are fighting us every step of the way. It is *always* the problem. They will tie us up in court saying we cannot do this and cannot do that. So, it is a tough go....We have a real[ly] progressive government now, and that is helping. (*Dawson County Local Civic Leader*)

There are people that want to emulate the old ways the rivers used to flow and have the spring rise on the Missouri so that it benefits the Pallid sturgeon, and the birds....But, by the same token, you get into the people who are fishing out of Fort Peck, and they want the water in Fort Peck for whatever fish are in Fort Peck. So, the two different recreation entities, or Fish and Wildlife entities, are battling over some of that. (*Richland County Local Civic Leader*)

[Some want it to] be fenced off, so no livestock would get into it. That was a big move, at one time, and they wanted to fence that all off and protect all that area. (*Prairie County Local Civic Leader*)

I, myself, believe that [by] putting in a dam on the river...they create a controlled way to keep flooding from happening and a controlled river-flow downstream. At the same time, they make better use of the resource through recreation, or irrigation projects, or power, or whatever. I think you can physically do things to a river...for the betterment. A perfect example is the fact that they built the dike, here, sixty years ago to try and make the community better. (*Dawson County Local Civic Leader*)

There was a guy across the river, and he wanted to put an irrigation project together....He was going to put a pump site on the Missouri River....And [at a hearing] they actually had a guy stand up and say, 'You can't do that because that pump site,' —which would probably stick out in the river let's say 50 feet or 100 feet—the canoes that will be coming down there, will be so wide that they won't be able to fit through on the Missouri River.' This guy was really serious. So, the intellect of those people sometimes, I mean, really. (*McKenzie County, ND Local Civic Leader*)

C. Agencies Are Suspect

They were going to put in a coal-firing generator plant. It is a real coincidence that certain...agencies, all of a sudden, made it known that this area was primary [for] black-footed ferret introduction. And we have to put the prairie dog back in there....It seems...they want to stop any potential economic development from getting off the ground. They say,...'We are going to reintroduce the prairie dogs so we can get the black-footed ferrets back.' The real reason did not have anything to do with the ferrets or prairie dogs. They did not want a coal-fired generating plant....It is people within the agencies that pull a lot of dandies,...just like our road, out here. We can't work until nine o'clock because of the birds out there mating. We have to wait until the birds are done mating before we can work on the road. (*Prairie County Local Civic Leader*)

And, this deal up here, the Calypso Trail,....they had a lot of historic background on it, and stuff, but it became wilderness study areas, on both sides, and there's been a lot of pressure within the BLM to leave that road, and let it deteriorate and go away. We...pushed to leave that road, and...we had an area manager that was in full support of it....They stated that the road...would stay open going through [these] wilderness study areas, which is a first....They [said they would] put \$30,000 in culverts, and it's down on paper. But they never followed up. This road has just deteriorated to nothing....What I'm saying is, there are people in federal agencies and state agencies, and I will specifically say the BLM, that are supposed to be managers in non-political positions....[But they]...let people outside the agency know of internal issues....They have political motives, but they work for the BLM. And I think that goes on a lot. I think there...[are] a lot of little leaks...And how you prove who did it? (*Prairie County Local Civic Leader*)

This is a political world, and I have a feeling whatever we say won't matter anyway. (*Prairie County Local Civic Leader*)

V. The River As a Recreational Resource

A. Recreational Uses are Good and Have Minimal Impacts

A few people like to collect agates on a regular basis...but I do not know anybody that goes every Saturday night fishing on the Yellowstone. (*Prairie County Local Civic Leader*)

I cross [the river] every time I go to town. I enjoy the view, but I do not go [to the river]. When I was a younger kid we used to go there. It was always a good gathering spot for your young juveniles. (*Prairie County Local Civic Leader*)

The second leading activity in our area, after fishing and recreation, is [that] we are blessed with a high quality of agates. I know we get a lot of people, from all over the world, coming here to find agates. Ten miles up and down the river, either direction, you will find people along the shore. After spring, and any turbulence, we get a lot of agate hunters. (*Dawson County Local Civic Leader*)

[Recreational users are] local....from Glendive to Miles City, I would say. There are not too many people from Billings who come down here fishing....This is a very hunted country. The hunters are out-of-staters, mostly, and a lot of local people. (*Prairie County Local Civic Leader*)

It is a wonderful recreation facility when there is enough water. The paddlefish season, in the spring, is a great attraction to people from near and far. (*Richland County Local Civic Leader*)

We have a bunch of fellows that fish every day, down there, for catfish, and then they have a big catfish steam. It is big in the Fallon area. (*Prairie County Local Civic Leader*)

There might be an increase in recreation....We could attract more business....because there...[are] going to be more people...[who] would want opportunities to access recreation. The Yellowstone, and Missouri and whatever we have available closest,...will be impacted. (*Richland County Local Civic Leader*)

There are a lot of agates. That is a big commercial thing. (*Richland County Local Civic Leader*)

B. Sympathetic Response to People Wanting to Experience Nature

Development of the recreation area has been a big priority. We hope to add to that with some walking paths, and biking paths, and things like that. We are home to the largest state park in the State of Montana. Makoshika State Park borders our southern edge of the city, and...we are tying that to the river access and recreation. That is a high priority....Nobody has talked to me about not wanting it. (*Dawson County Local Civic Leader*)

I like the Lower Yellowstone-type of environment as opposed to the babbling brooks. They're nice, but I prefer this type....Mainly, the big cottonwoods, the feel of the canopy, and stuff, it's different than being in the pine trees....It [is] a positive experience, and so you change your day....It is a positive place....It's not about the hunting; it's not about the fishing. It's just the experience. It's always positive. The river is a heck of an asset. We're fortunate to have...[both of them]in our county....You can create any recreation you want. The resource is there; it's just how you enjoy it. (*Richland County Local Civic Leader*)

It's a very peaceful place....When you're farming, it's a very stressful business. And, over the years—and I'm sure I'm not the only one—I can remember when things were just going all to hell, I'd get in the pick-up, drive down to the river, maybe with a fishing pole, and maybe just for nothing, and just sit there because it was so peaceful. Watch the pelicans land, and they'd fly up, and they'd set down, and they'd float by you, you know. There's lots of wildlife down there. And, so you have that to look forward to, too. That's what I'm saying, it can be your livelihood, and it can be your salvation at the same time. (*McKenzie County, ND Local Civic Leader*)

I know a lot of people who will go down and do recreation on the river. A lot of people fish on the river....It gives people an opportunity to get away from the everyday stress and just go sit at the river banks without having to drive a long distance. (*Richland County Local Civic Leader*)

I think [the Yellowstone River is] a very well-hidden secret...It is getting more and more known because of ...the big Confluence Center that was set up, here, a few years ago. That's a multi-million dollar structure....We [also] have the railroad bridge, just east of Fairview, Montana. And the only tunnel in the State of North Dakota....It's open to the public, it's been made into a walking bridge, and it's very, very interesting. (*McKenzie County, ND Local Civic Leader*)

It's so different when you get on that river and look back toward the land because you don't feel like you're in the same place. It's just like being in a wilderness because of the willows, and the cottonwood, and everything that's growing along the riverbank. You look at it from a different perspective, you just look at trees....From this side, when you see the farmland, you say, 'Oh, there's some trees.' You don't see the water. So, it's very interesting. You would never believe you're in the same place. I've done it several times. You know, just take the boat up and just let it float. (*McKenzie County, ND Local Civic Leader*)

I haven't ever seen one of those canoes come down here. I mean, one or two, and I hope they do, because people should enjoy the river. (*McKenzie County, ND Local Civic Leader*)

C. Recreational Access Functions via Private Owners Willingness and A Few Public Efforts

In our community, where everybody knows everybody, they know someone that has access somewhere. If they don't, there are public access sites. I have never heard of anybody complaining that they were denied access to the river. (*Dawson County Local Civic Leader*)

I would bet you that 90 percent of the time, if you asked somebody, 'Could I go down here?' they would let them. They're good people here, but they still don't want to be walked on. And so and that's where I think the conflict would come from, something like that....There just aren't a lot of access points on this river. We have this little park here, and then the boat ramp at the confluence. You go in-between...them two points, there's none. (*McKenzie County, ND Local Civic Leader*)

The Yellowstone, here, is hard to use because of access. On our river stretch we probably have three or four access points in sixty miles. That is the major problem. Secondly, it becomes seasonal use because of high water and low water....We have catfish, sauger and walleye. Of course, our paddelfishing has been controversial at times. They have commercialized it to the point that it brings in people from other states and countries, and they get here, and the season is closed. That is according to the regulations that protect the paddelfish. The season this year was ten days. (*Dawson County Local Civic Leader*)

We are pretty limited [in our involvement with the river]. Probably the first thing that we have done since I have been in office is...we applied to build a boat ramp. We have a little county-owned park just north of Sidney, and we applied [for] and received a grant to build a boat ramp....[W]e think that is going to be a great benefit, especially coming into the Lewis and Clark season. (*Richland County Local Civic Leader*)

We are in the process of helping Walleyes Unlimited deed about 80 acres of riverfront property to Montana Fish, Wildlife, and Parks, for a fishing access site, and boat ramps, and a picnic area. The City is very willingly participating in this. I see things like this

transforming the river into an everyday recreation area. (*Dawson County Local Civic Leader*)

I still believe very strongly in property rights, and I still think that if you own it, and if somebody wants to cross, and if I say I'll let you cross you're going to pay me ten dollars or twenty dollars. That's up to [the landowner]. I don't think that the government should step in and say we're going to pass a law that says that you have to give access to that private land....I just don't believe that's right....Let's educate the public on this. We could have better maps that show the owners of the land so if you wanted to go down there, you'd know who to contact. (*McKenzie County, ND Local Civic Leader*)

One year ago, the Walleyes Unlimited approached our commissioners and wanted to get access to the other side of the river,...and we granted them easements so they could get down and over the dike. Their plan, in cooperation with Fish, Wildlife and Parks, is to build some recreational facilities along that side of the river. Nothing permanent because of the flood plain issue, but...maybe a boat ramp, or concrete picnic tables—something that wouldn't wash away. (*Dawson County Local Civic Leader*)

I would say that we are a big enough community to be able to provide all kinds of goods and services for people. There is lots of activities and recreation; we are close to Fort Peck Lake. (*Dawson County Local Civic Leader*)

D. Dangerous River

[Locals] do not [get on the river] for recreation; it is a dangerous river. Most people will tell you to stay out of that river; the undercurrents are terrible....It is the second most dangerous river in the world....You will be going, and, all of a sudden, your feet will just go like that, and come up like that, and it will pull you back down. You will be going the same speed, and all of a sudden you will have an undercurrent kick your feet up, and you will be going...[much] faster. There are some undercurrents that are just amazingly fast. (*Prairie County Local Civic Leader*)

We had a young boy...[at] Seven Sisters, which is south, and [he] was swinging off the rope [into the river]....Then he and a gal were carrying on, [when] they realized they were being swept down the current. Another gal swam out and saved [the first girl], but she couldn't get to him. He was pulled under. He drowned, and it was three days before they found him. He was seventeen. (*Richland County Local Civic Leader*)

You try to tell [young kids] it has tremendous undercurrents that are way faster than what they think. It is way faster than what most people think. It is not like the Missouri. (*Prairie County Local Civic Leader*)

Along this area the river is very dangerous, and the river is actually flowing into the ground. The son of a good friend of ours fell through the sand and he did not come out for a couple of days. It is a very dangerous river. (*Dawson County Local Civic Leader*)

E. The Diversion Dam

We have the paddlefishing down at Intake, and that is a big thing. They are trying to develop it more. (*Dawson County Local Civic Leader*)

There are no structures on this stretch of the river, other than where our diversion dam is at Intake, Montana. And people get kind of the wrong impression of what a diversion dam is. [Initially, it was] just a wood structure. The water would flow over it, and it just kept the elevation of the river behind it about four feet higher than below it. Over the years, because of the ice jamming...that would push...down. Well, [the ice] kind of messed up the dam a little bit. So, what we've been doing is putting rock in there. So when you look at the diversion it's kind of like a rapids would be in a small creek. But, it's in a river situation, and it holds the water high enough to go into our [irrigation project]. It's all gravity flow. We have no pumps so we don't have to worry about using electricity and things like that. (*McKenzie County, ND Local Civic Leader*)

The Intake Diversion Dam...keeps the paddlefish from going too far upstream. Our paddlefish season is very productive. They have now limited it to 1000 fish caught, or six weeks. The last two years, the season has lasted seven days and ten days. That is because they can go down to the dam and snag them, and haul them out. (*Dawson County Local Civic Leader*)

This little diversion dam is what they're looking at....They want to go down the river about 900 feet, and they want to concrete across and place huge boulders in there, which they feel [should be made of] granite, or something. And, then they think that these fish would go up there, and then rest, and then go on up. They don't know if it will work, but they're willing to spend \$60 million to find out....And we're hoping that they have their funding in place to get this thing done. The Corps was just here...and the main thing is the Pallid sturgeon in this area. They want to make sure it can get up over the dam. (*McKenzie County, ND Local Civic Leader*)

I don't know if...[recreation and agriculture] impede on each other. They may, because of the Intake. They are talking about taking the Intake out. The Pallid sturgeon is having a hard time because of the diversion dam. It was put in back in the early '30s for the purpose of backing-up the water, and putting it into a canal for irrigation. They are going to have to look at putting in an expensive pump if they take it out. (*Dawson County Local Civic Leader*)

VI. Dealing with Potential Growth

A. Newcomers and Their Needs and Desires

With the coal gasification and the energy plant,...they figure that two to three hundred families are coming to Glendive. We might have fifty houses for sale in Glendive. That is going to be our biggest problem, and we are better off than the rest. (*Dawson County Local Civic Leader*)

Riverfront property will receive great premiums over what it will ever [earn through] agricultural uses,...even some of the big cattle ranches. There are people [with] ranching operations up in Belgrade and Bozeman who are selling those [ranches] for development, and then they are turning around and investing that money in some good-sized ranches in this half of the state....It is not just Western Montanans, it is also [money from] out-of-staters...coming in. (*Richland County Local Civic Leader*)

People want to come here because of the solitude. (*McKenzie County, ND Local Civic Leader*)

I have seen a major change in ownership along the river. We [now] have private landowners with a lot of money....[They are] buying up large tracts of land....Across the river we have a big shooting club. They have a big lodge over there, and they've tied up a lot of land that they own and lease. So, we've got different people now controlling what's going on, and the focus isn't farming; it's on recreation....If your focus isn't being a rancher, you're going to lease it to somebody...maximize dollars, then get the heck out....Well, that's state-wide. Everyone wants to get to the water....Access is going to be a major problem. (*Richland County Local Civic Leader*)

Some of the most pristine land, and the highest land values in the west, are right next to the river....The new people want the aesthetic parts of it. There are some very beautiful panoramic views of the river where people build houses....I am not a policy maker...I'm an enforcer, and thank God for that. (*Dawson County Local Civic Leader*)

B. Anticipating Change

I see the Yellowstone transforming, from a necessity, 100 years ago, to being a central area for recreation and enjoyment. (*Dawson County Local Civic Leader*)

A farmer or a rancher,...they're very independent...[They say] 'Don't mess with my space.' But,...there's not very many of them left. (*McKenzie County, ND Local Civic Leader*)

Right now, we are in the middle of our third boom from oil and gas activity. How long this will last no one is sure, but with \$75 per barrel of oil, it is liable to last awhile. The two largest producing counties in the state are on either side of us: Richland County and Fallon. We are right in the crosshairs, [and] we are out of housing, and out of places for real commercial development....We saw that in the early '80s. Then the oil activity quit, and everybody packed up and left, and we lost 3000 people. Whether we will see another thing like that it is hard to tell. (*Dawson County Local Civic Leader*)

We will still be agriculturally based, but there is going to be a lot more influence from energy production, oil and gas. (*Richland County Local Civic Leader*)

I think one of the things that is happening to all of Eastern Montana is that we are getting so many people that are coming from the west, coming over from Western Montana, that

are sick and tired of the mess in their communities. Like Bozeman—what a disaster that town has become because of this influx of folks from California, and every place else. Growth is wonderful as long as it is controlled, but not this rapid growth and all of the problems that brings. (*Dawson County Local Civic Leader*)

I think we're going to get more tourism-type stuff going on. We have so many natural treasures here....You'll have your hiking trails, [and] your cross-country skiing. You'll have horseback riding, [and] you'll have fishing. Theodore Roosevelt Park... Medora, ...Fort Union, Fort Buford, the confluence....You could canoe or raft that river, you know. It is slow and gentle...And we do have nice wooded lands along the river. The drawbacks, here, are the mosquitoes—you'd better be pretty tough. Lewis and Clark knew it, and put it in their journals. And, in the wintertime, there's ice fishing going on. I mean, the river is used year-round....We're promoting it more....We've had the...Canadian-American bicycle riders. (*McKenzie County, ND Local Civic Leader*)

You have farm land north of town, and off toward the river, but that's irrigated farm land, farmers aren't going to give that up yet. (*Richland County Local Civic Leader*)

There might be more irrigated land that goes in because they can develop ways to get farther away from the valley itself. [They can] pump water up into pivot systems....Sprinkler pivots are making...better use of the water....That would be one huge change: the amount of pivots there will be here in ten years as compared to what there is now. (*Richland County Local Civic Leader*)

In ten years, if something doesn't come in to make this community thrive, I look at it becoming a senior citizens' center. The community is aging. All of the young people are leaving....In ten years, if energy doesn't open this country up with oil or coal, it will just be trying to survive. (*Dawson County Local Civic Leader*)

A group of people bought up a thousand acres just north of me to turn into a wildlife management area. Well, I could build a big lodge...and say, 'Hey, bring your people out here and have a nice relaxing barbeque, look at the wildlife, look at the free-flowing rivers.' I mean, it would be easy to sell, I can see that. Why hasn't it been done? [I don't have] a million dollars....And, to [some] people a million dollars is nothing....That's the ones I'm scared of...because they aren't looking at this as an agricultural thing, anymore. It's already happening, here, already. Especially in...the badlands, people with lots of money buy up these ranches because they're secluded, and...the trouble is they come in and...want that road closed. 'What do you mean you want that road closed; it's a public road?''I know, but it makes too much dust.' Too bad—there's a rancher that has to use that road because he's still living off the land. So, there is that different mind set that comes in. (*McKenzie County, ND Local Civic Leader*)

There are a lot of people from...the western part of Montana [where] the hunting access has become a huge issue as people are shutting off land....Private lands are going more to outfitters and guides,...[and] you have to pay for the right to hunt. So, if people are going to have to pay to have access, they may as well just buy the piece of land and own

it....We are seeing a lot of that....Yes, we got a big influx coming [from] Bozeman and Missoula, really a tremendous outflow....They can sell their land for big prices there, and come here and buy it for half price. (*Richland County Local Civic Leader*)

Hunting....upland game birds...big game deer and antelope. Fishing...and boating has started to grow. There has been a push to put a lot more boat ramps, and stuff. We have one on the Missouri, now, and there is another one going in. And there are already three on the Yellowstone: one at Savage, one by Crane, and one by the MDU Bridge. (*Richland County Local Civic Leader*)

C. Change as a Threat to Agriculture and to the US Food Supply

Well, do you want to buy your food from another country where their rules and regulations aren't anywhere close to ours as far as food safety goes?... You don't know what's in that food....You'd better take a hard, long, look and get back to the people, here, in the United States...And, [with] these rivers, the water is going to be more important than gold or oil, because you if don't have water, you don't have...[anything]. (*McKenzie County, ND Local Civic Leader*)

Missouri River to Powder River: Recreational Interest Group Overview

Fifteen interviews were conducted with individuals who use the Yellowstone River for recreational purposes, including hunters, fishers, boaters, floaters, campers, hikers, bird watchers, rock hunters, photographers, and others who use the river for relaxation and serenity. Participants were recruited from referrals provided by members of the Resource Advisory Committee of the Yellowstone River Conservation District Council.

Participants were also identified and recruited by contacting various organizations such as Ducks Unlimited, Walleyes Unlimited and by contacting local outfitting businesses.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|---|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Missouri River to Powder River: Recreational Analysis

I. Valuing the Yellowstone River

A. The ‘Prom Queen’ of Rivers

I grew up close to the Mississippi. I was on the Mississippi all the time...fishing...and a little trapping. Down there it's 'Old Man River.' This one here—this is the 'Prom Queen.' (*Richland County Recreationalist*)

It is pretty spectacular in terms of what you can see. You will have stretches from here to the confluence, and...it is back-to-back cottonwoods....[Then] there are some really nice cliffs by Pompey's....The Missouri is considered wild and scenic, but it doesn't change as much....[The Yellowstone has] much more diversity. You can see agricultural things,...pretty farm fields,...islands, and trees...You get out here, and you can look for miles. At Terry, and by the Powder River, with the history of Custer camping there,...you can look up in the hills and damn near see it. (*Dawson County Recreationalist*)

[You can see] whatever you want to see on the river. There are rapids if you want that,...little stretches of whitewater. It can be very meandering, or big and wide. In some places it is only a foot deep. If you come in the spring, you will see a river that is rolling, and rolling, and muddy, and nasty. If you come in the fall, it is a pretty blue-green color, and you know the fish are down there. (*Dawson County Recreationalist*)

The scenery...the history of the cattle drives....[And it is] one of the most treacherous rivers....When I'm trapping beaver in the winter, I've been through the ice to the bottom of the river too many times. It changes so much,...[and] a cloud can move, and something looks so much different. The pictures that I've taken, and the people that I've taken down there, they're just in awe of it. (*Richland County Recreationalist*)

Intoxicating. (*Richland County Recreationalist*)

It's a very beautiful river. You can start in the western side of the state, and it is very mountainous and beautiful, [and] when you come here, it is more calming and soothing. It is more restful....The sunsets here are gorgeous. A friend of mine took a picture that is just breathtaking....It shows the hillsides reflecting on the water. It's just gorgeous....It's so fun to go exploring on. You can find anything, from recently dead animals, to skeletons, to fossils. So, it is always a pleasure to be out there. (*Richland County Recreationalist*)

It's kind of a neat river. It's unpredictable; you never know what it's going to do. (*Dawson County Recreationalist*)

It is amazing to see the ice breaking up in the spring. It is really a sight to see the chunks of ice that go along the banks. It used to be everybody would run down to the bridge to watch these huge chunks breaking up and going up on the shore. (*Prairie County Recreationalist*)

B. *The River as A (Secret) Refuge*

We can get out on the river and you will hear us going back and forth, but I don't think we ever talk about work, or problems, or whatever. There are times it is really nice to get out there by yourself, too. (*Dawson County Recreationalist*)

Between here and Terry, there are probably eight or ten houses built, primarily, with a good view of the river. There are a few south of Glendive, and then there is my place and a few more houses....From Terry to Miles City, there is almost nothing... It is amazing how few houses are built for a view of the river....[In] other parts of the country there would be a whole line of houses. (*Dawson County Recreationalist*)

I'm in one of those jobs where, if you start to get bent out of shape, you need to walk away from it. It's my mental health that keeps me coming back to that river. (*Richland County Recreationalist*)

It's pretty by the river,...[but] I purposely don't tell a lot of people about it. I'll go down the river, float ten miles down the river and not see another boat. I'll take someone with me, and they ask, 'How come there aren't more people out here?' And I say 'I just don't tell them'....That is what draws me to it: the lack of people. (*Richland County Recreationalist*)

We are a hidden secret right now, but that ain't gonna last. I fish on it. I hunt on it. I have a jet boat that I play in the river with. Sometimes you go and float the river and relax. (*Richland County Recreationalist*)

We might as well be on the dark side of the moon....Montana has seven different topographies, and each one has a beauty of its own. People are starting to figure that out and come over here. So, right now, we don't have [a] conflict...[but] I can see it [will] probably be coming as the billionaires push the millionaires out of the west. They start coming on back this way because things become more affordable, and they say, 'Wait a minute, this is getting a little too closed in, so now we want to get into the wide-open spaces.' (*Richland County Recreationalist*)

I've never had a conflict with anybody. We're just all good people. Small town thinking, basically. (*Richland County Recreationalist*)

The other thing is, I enjoy being down on the river. It's very relaxing, very calming, and very pleasing to be down there. It is very spiritual when you are down there. (*Richland County Recreationalist*)

Not soothing, but a calming effect. (*Dawson County Recreationalist*)

Pretty laid-back, not a 'rush-rush' mentality. Just kick back, and take it easy....I've run into other people out there....[I'll] talk to them for a minute, then leave them alone and go somewhere else. (*Richland County Recreationalist*)

I do fish, I like to fish. Often times we'll pull up on a bank and make a campfire. We've taken the tent and camped out. Spend time with the family, mainly. (*Dawson County Recreationalist*)

It is unfortunate that people don't take advantage of the river. [I wish] we could get one-half of one percent of the people that go by on the interstate to come into our town. (*Prairie County Recreationalist*)

C. *The Many Recreational Uses*

The Yellowstone is very important to me. I go hiking there every day, I guess....I just enjoy the beauty of it....[I go] five or six times a week,...wintertime, too,...probably for thirty or forty years. At least thirty years. (*Prairie County Recreationalist*)

I fish on it. I hunt on it. I have a jet boat that I play in the river with. Sometimes you go and float the river and relax. (*Richland County Recreationalist*)

Part of the reason we are still remodeling [our home] is that there are so many fun things to do on the river...we go do something else, other than remodel[ing]. (*Dawson County Recreationalist*)

You see people picking asparagus and mushrooms in the spring. (*Dawson County Recreationalist*)

A lot of people are interested in seeing what's out there. They think, 'let's float it!' (*Richland County Recreationalist*)

There is quite an agate picking business in this area. Some of the old agate pickers may have gone on. Agate shops used to be a big deal....We see more people picking agates but they aren't cutting and displaying them like they used to. They were a little more visible. (*Dawson County Recreationalist*)

[Agate hunting] is getting passed down through the generations....We take our kids out with us....[and] I went with my dad when I was really little. He would spot one, and he would go, 'There, see that? That's the color; that's the look; that's what you want to pick up'....Then, while they would go fishing, I would do the agate picking. (*Richland County Recreationalist*)

It is a very interesting system....You will find birds along the river that you won't find anywhere. You won't find them [for] 100 miles in either direction. That is, basically, a

corridor. There are birds here in town that wouldn't be here without the river. Besides being a highway for sauger fish, it is a highway for birds: the smaller birds, plus good duck and goose hunting. It can be quite different from the whole rest of Eastern Montana. There are a lot of bald eagles. (*Dawson County Recreationalist*)

I use it extensively...fishing, trapping, canoeing, kayaking, agate hunting, diamond willow hunting. You name it, I do it. (*Richland County Recreationalist*)

Once in a while, we'll find sandbars and play golf on the sandbar. We like doing that because nobody else is there. (*Richland County Recreationalist*)

During the wintertime the river freezes pretty solid. And a lot of the people do take their vehicles down there and drive out onto the river and fish. (*Richland County Recreationalist*)

We shoot carp with bow and arrow. (*Richland County Recreationalist*)

One of the things in our area is...the agates. The Montana agates, [and] the moss agates that you can find down along our area....Even when you find the little ones, it is such a pleasure and a joy....[But] when you are looking....a 'pick rock' can fool you. You'll see a really great, big rock, and your heart really starts thumping loud, and then you turn it over and, 'ugh.' It's called 'pick rock.' You just keep looking and hoping....I've come away with about two dozen in a day. When I first started looking, I'd only get a few a day. But now that I have been out there a number of years, it is getting better and better every day. (*Richland County Recreationalist*)

There's a great heron nesting site [with] about thirty nests in those cottonwood trees. There are a couple places where the beavers are active....There are the geese that stay here on a year-round basis, and even the migratory geese that come in. The waterfowl is just fantastic. The hunting. I don't want to brag that up too much because you don't want everybody coming in, but it's just incomparable. (*Richland County Recreationalist*)

Lot of petrified wood. (*Richland County Recreationalist*)

A lot of the kids go swimming in it. You can't really ski in it, but they call it 'tubing.' They get out a tube and get pulled down the river by a boat. (*Richland County Recreationalist*)

They used to get ice off of the river. I don't suppose that's an interest now. (*Prairie County Recreationalist*)

D. Dangers and High Water

I don't like to see kids getting in the river. They get careless, and we do have drownings. It is a good place to walk along, but you have to respect it. (*Dawson County Recreationalist*)

This one flows at about seven knots, and I don't doubt it's going a lot faster than that. When you're moving at seven knots, if you're in a power boat you've got a lot of dynamics involved. You've got logs, and when these ice jams come down, they'll move a wing dam....You have to just keep going...like a drunk sailor. You're never in a straight line. (*Richland County Recreationalist*)

There was a guy, last year, that drowned. They were fishing and he threw an anchor out, and it tipped their little boat over. I picked up one guy, and they never found the other guy. There was a carload of four in Miles City that went off the dike, and they washed up and beached here three weeks later. That was about the worst. (*Prairie County Recreationalist*)

You really have to be careful down there when you are walking around. If there is a rainstorm on the west side of the state...there may be a rise in the water that you are not aware of that's coming down....Also, the Intake Diversion Dam can be a very dangerous point. (*Richland County Recreationalist*)

Around here, everyone grew up with their parents telling you, 'Stay away from the river. It's dangerous.' So, we just went there more...[but] I knew about the whirlpools and stuff like that. (*Richland County Recreationalist*)

About five or six years ago we had a serious flood and had about twenty families out of their homes, on this channel over here. Oh, yeah, it was right in the homes. All due to ice jams right here, and down on the other bridge. People know it's coming....It starts to back up, and it starts to rise, and it melts, and...what are you going to do? You don't want to blow it up with dynamite. Actually, back in the 1940s, they had a big problem down in Miles City. They used B52 bombers from the Air Force base to break it out. They dropped bombs on the river, on the ice. (*Richland County Recreationalist*)

E. Yellowstone is Convenient

It is convenient. It is close. When we go out, we seem to catch numbers of fish. (*Dawson County Recreationalist*)

II. The River's Resources

A. The Things We Love: Wildlife and Fisheries

I love cottonwood trees. There are a lot of those. In the wintertime, there was a family of squirrels living in the cottonwoods, and I used to bring them nuts, you know. They really enjoyed that. I don't know if that was a good idea....One reason I started feeding these squirrels, I seen this big pile of cockleburs, half the sides were eaten off....On the inside there is a real nice nut that tastes about like a sunflower seed. They can live on those; they don't need anything else, I don't think. There are plenty of cockleburs there. (*Prairie County Recreationalist*)

There is a snowy owl that lives over here....He sits over here and eats pigeons....We see beaver in this channel when the water goes down. Bobcats, we see bobcats, and raccoons; we saw a coyote one time... Down here we have seen an occasional rattlesnake. (*Richland County Recreationalist*)

Definitely the wildlife. There are times in the fall we will go down the river in our boat, and we will come around a bend, and the ducks and geese will about block out the sun. (*Dawson County Recreationalist*)

There's catfish, mudcats...and the paddlefish....They are amazing. They are, probably, the best fish to eat on the Yellowstone—that I am aware of. You are limited to one or two a year. There are only certain areas along the Yellowstone where you can catch them. That is from Glendive to the Intake. (*Richland County Recreationalist*)

One thing we have noticed, we have started to see some elk come through. We are excited to see them come through. (*Dawson County Recreationalist*)

You'll see a lot of bald eagles,....In the last ten years, [we see] more and more. It's not uncommon [to] see four or five bald eagles. (*Dawson County Recreationalist*)

It's...where all the life is. There's pelicans, deer, blue heron. Oh, there's little dippers, killdeer, horned toads. Just a lot of things to see, especially this time of year. Pretty soon the yucca plants will be blooming because it was kind of a wet year. In the spring, quite a few wild flowers come out....[And] there's an asparagus patch....I think there used to be more of the...blue herons. There used to be quite a few of them right across from where that asparagus patch is. At one time, there was quite a few nests of these blue heron. And then, the hawks, you know, the red-tailed hawks....When you get near their territory, they'll take off and they'll circle and they'll screech at you. I always like to hear that noise. The geese are always talking. So, it's just an alive place. (*Prairie County Recreationalist*)

You never know what you're going to catch in this river, which is one of the great things about it. Lots of catfish, sturgeon, skip jacks, bullheads, carp, sauger, walleye. In the fall, it's not uncommon to catch northern pike out here at Intake. I've caught trout in here, salmon, and, of course, paddlefish—that's a seasonal thing. Basically, any type of freshwater fish is in this river. (*Dawson County Recreationalist*)

B. The Things We Worry About: Habitat and Management

I am concerned...that the Fish and Game [is not attentive to] how fragile the river [and] the fisheries are. They have always said the fish would take care of themselves. (*Dawson County Recreationalist*)

There is no legal limit for size....When we fish we put a size limit on ourselves. Too little, they go back. Too big, they go back. I would like them to [set a legal limit]. (*Dawson County Recreationalist*)

In certain years the river is really clear and people go totally nuts. I know that one year, at Miles City, there was a ten-mile stretch where they caught three-fourths of the fish and took them home. That was when the limit was ten, and people were going out and giving them away. That fishery never, totally, recovered down there....More people are a lot more conscientious about what fish you can take, and what size. There...[are] a lot more people that are policing themselves. (*Dawson County Recreationalist*)

When we were dropping [the limits] from ten fish to five fish, there was a guy north of town that said, 'Five fish wouldn't feed his wife and him.' He was filleting a fish that was so small that he was right. I told him to let those go and the next year they would be that much bigger. (*Dawson County Recreationalist*)

The big factor that has caused the decline in the fishery would be the Big Horn Dam. It has ruined the sauger, but it has made a world-class trout fishery. It does more damage to the Yellowstone than any other factor, like runoff or over fishing. It changed the native fish environment all the way to Miles City. That whole system was changed. (*Dawson County Recreationalist*)

The fish that have destroyed the fishing are rainbows and browns, and they aren't native. (*Dawson County Recreationalist*)

The over fishing is a short term problem. They need to have supplemental stocking. (*Dawson County Recreationalist*)

The beavers are a big problem because the river will support a lot of beaver....Beavers will move up [a] feeder stream because they're looking for new territory....[Then,] they head down, and they make a set mound right at the mouth of the stream....And, then they migrate to where they're clear out into these fields,...to where they've cut off sugar beet leaves, and they've started damming up their [irrigation] ditches....One guy called me at noon....[He had] parked his tractor, went home for lunch, and a beaver dropped a tree on his tractor. (*Richland County Recreationalist*)

We used to have big deer out here. I don't know where they are anymore. I think that they have been over-hunted. People that come out here and shoot the little two-point bucks, and three-point bucks, they should shoot a doe. Leave them [little bucks] to grow. It used to be nothing to shoot a four-point buck, but you really have to hunt for them now. (*Prairie County Recreationalist*)

As far as fishing goes, the Fish and Game has done a good job of managing the fishery. They don't do a hell of a lot. When I say managing, I mean restricting how much is taken out. They have limited the paddlefish to 1000 per year. At one time they were taking over 3000 fish a year from Intake. The population was in a downward spiral at that point. We were concerned about that. (*Dawson County Recreationalist*)

Montana and North Dakota are lightly-populated states. If you go down the Missouri River, then those states are not so lightly-populated, and they got more pull. You would

like to think that the Corps of Engineers didn't do things like [favor the downstream], but go look at Sacagawea, and Fort Peck to some degree. It used to be that North Dakota was upset, but now Montana is catching on. In the last five to ten years, Montana started to get excited about [the downstream favoritism], too. (*Richland County Recreationalist*)

Now, one thing that is probably going to pop up sometime when the river is low is MDU [Montana-Dakota Utilities]—the big power plant in Sidney. I don't know how much it raises the temperature of the river [during high water], but I'm sure that when the river goes down, it still pulls out the same amount and it warms [the river] to some degree. (*Richland County Recreationalist*)

C. *The Things We Argue About: Diversion Dams and Pallid Sturgeons*

It seems like they have gotten a little too much emphasis on the endangered species part. I don't want the Pallid sturgeon to disappear, but I don't know how much money we can spend on it. I don't know that they can do a whole lot about it. I don't feel that they should let other fisheries go because they want to spend so much time on the endangered species. (*Dawson County Recreationalist*)

[My friend has] been spending a lot of time studying those [Pallid sturgeon], and...he told us there are no young ones because they're not going past Intake [to] spawn....They're a tough species to re-populate because they're old [when they spawn]. Some of those Pallid sturgeons might be 60- or 70-years-old. So, you can plant babies, but you don't know if it will do any good for a long time. (*Dawson County Recreationalist*)

From my understanding, and you have to understand I'm not an expert on this, you can keep the dam, keep the irrigation and canal the way it is, but the fish need to have an alternate route to get over the dam. (*Dawson County Recreationalist*)

I think the numbers that have been thrown out are really exaggerated. I don't remember what they claim end up going up the canal. There...[aren't] that many fish in that whole area...to substantiate those kinds of numbers. (*Dawson County Recreationalist*)

[Some say,] if a fish is in the canal, it is a dead end....No, it isn't. That canal dumps into the river....When [farmers] shut that down that canal, they come up with catfish and, very seldom, a sauger or walleye. I don't agree with the numbers....There was a guy that released a tagged one in the canal and it was caught in the river in the fall....Right now, we have a disagreement what the actual numbers are. If, in fact, we are losing that many fish, then we do need to limit the catch,...[and], maybe, there should be some kind of system to get them back in the river. (*Dawson County Recreationalist*)

D. *The Lucky Thing: Free-Flowing and Natural*

We're lucky with the Yellowstone. This is a wild river. This is the last free-flowing river, and we don't have pollution like you have in a lot of other rivers....You have a couple of

diversion dams, but there are no dams that control it. Yangtze River used to be the other one, but they blew it....They put that hydroelectric dam on it. (*Richland County Recreationalist*)

I would hate to see them dam the Yellowstone. Isn't it the last free-flowing river, or at least one of the last? When they make changes, like when they put in that Yellowtail [Dam], that seemed to kind of effect the flow. (*Prairie County Recreationalist*)

You don't want to dam this river. This is one of the, *the*, last wild rivers in Montana, and it may be *the* last wild river in the nation. There is no dam on the Yellowstone, and we really don't want a dam on the Yellowstone. (*Richland County Recreationalist*)

My biggest concern is...[a] dam. It's a wild river. It needs to stay a wild river because it's one of the last ones....If there were wild rivers across the United States, then it would be no big deal. But when this is one of the last, if not *the* last, then that's different. If it is the last, then we need to keep it just because it is the last....That is my biggest concern. (*Richland County Recreationalist*)

The river winds its way quite a bit....Water is going to go wherever least resistance is going to be. I don't look for it to change a lot. (*Richland County Recreationalist*)

A lot of places I used to go on a boat are now land and there...[are] trees growing. That's caused from flooding—where it goes out, where it gets dammed up—the river changes channels and that's Mother Nature working. (*Richland County Recreationalist*)

A lot of landowners are paying taxes for land that's actually in the river, now. I think that's all part of that natural free-flowing-river thing. It's been like this ever since the world has been created; why change it now? (*Dawson County Recreationalist*)

Isn't it known for being the longest free-flowing river? (*Prairie County Recreationalist*)

III. The Importance of Public Access Laws

A. Access and Access Problems

One of the concerns around here is access for people to just go fishing, not necessarily everyone is going to float a boat. (*Dawson County Recreationalist*)

I hate the ideology of, 'I want to buy my piece of the last best place and then lock it up and keep everybody else away.' I can't see that. Access...[has] to be a key thing. One thing about our rivers in Montana...[that is] different than a lot of other states [is that] the state owns the water. The people...[own it]. (*Richland County Recreationalist*)

One of our problems around here is getting on the river with a boat. The best thing to do is use a boat that has a jet prop instead of a propeller, because our river is not very deep and it fluctuates. (*Prairie County Recreationalist*)

God's given me the ability to go down there....He's letting me play with it anyway I want to play with it. If someone tried to lock that up, you'd see the biggest renegade you've ever seen in your life. (*Richland County Recreationalist*)

You've got a lot of this river where there aren't access sites that are public. (*Richland County Recreationalist*)

You are seeing more people owning jet boats [because] they can run the river a lot easier. As for people getting access to put boats in, I know the hunting is getting tougher and they are locking the land for lease hunting, but I don't think that affects the fishing. (*Dawson County Recreationalist*)

Huey Lewis won a lawsuit, down in Hamilton, [regarding] a slough that ran through part of his property. We've got a lot of rich and famous people who come out here and want their peace. I've met a lot of them; I know a lot of them. I've had them hunting with me. He sued because [even though] everybody used this slough for a long time, he said it was not navigable water [and thus not public]. (*Richland County Recreationalist*)

Fifteen years ago, if you went up to a landowner and ask permission, seven out of ten times they'd let you go....[But] now, it's paid hunting. They want money, or they have it leased out to outfitters. This river bottom has a lot of outfitters now, where it wasn't [that way] before. (*Dawson County Recreationalist*)

Access is the key. They're working on that a lot in the west, trying to buy easements so they can alleviate a lot of the problem[s]. (*Richland County Recreationalist*)

Hunting is worth a lot of money, nowadays. (*Dawson County Recreationalist*)

I don't know if you're familiar with Buckmasters—ever seen them on TV? It's a pretty large hunting group. They own some land north of us, by Savage. They have a pretty good plot of land down there. [Before they bought the land], you could hunt down there, but, now, if you get too close, they're on you. They watch it pretty closely. (*Dawson County Recreationalist*)

There are very few places you can get on [to hunt] anymore. A lot of the outfitters have places leased out and then no one else can get on. There are a lot of people that do that.... You can't blame [the landowner]. Once they go to that, it is worth money to them. (*Dawson County Recreationalist*)

I don't think the public land should be outfitted. They shouldn't be allowed to hunt the public land. That is a major conflict. That is my biggest issue. (*Dawson County Recreationalist*)

I'll be selfish and say the perfect management would be to insure my access to the river, but that's just selfish. (*Dawson County Recreationalist*)

B. Decorum: Respecting Others and the Resources

We've had some problems with access sites on private property....One guy, he just sat around and waited for someone to step above the high water line. He was there to chew them out and call the game warden. When it's private land, it's private land. (*Richland County Recreationalist*)

These guys take their clients out during the week, and their clients are happy to shoot pretty much anything. We let small bucks go. But they are worth money to the outfitters, so they shoot them. We have seen the quality of the hunting go down quite a bit over the years because those guys are making money. It sucks because the [clients] are from New York; they don't even live here. (*Dawson County Recreationalist*)

I have a lot of respect for the river. I also have a lot of respect for the landowners, around here. If it is private land, you need to ask permission to go down there and get on the river. But, once you are on the river, if you have a boat, you are up and down the river. There is a certain area of the banks, where you can stay because it is public property along the riverbank. But, to get down there, you still need to ask permission from the landowners. And, I have respect for that. (*Richland County Recreationalist*)

If you are going down there, you are using somebody's property. Whether it is state, federal, or privately-owned lands, you need to respect it. What you take in, you take out. Leave it the way you want it when you go down there....Mostly, the trash that's along banks and stuff,...[is from] people throwing bottles and beer cans in the water, [and from] not taking care of the plastic bags and the rings from the six-packs....The birds get wrapped up in those, and then that's not pretty. I've seen some animals that were laying there with [plastic] wrapped around them....Take your trash out. Pick it up, take it home, put it in the garbage can. It's easy. (*Richland County Recreationalist*)

You don't really have too many problems among river users because they are one in the same. The guys that are irrigating are fishing. That guy in the motor boat is probably a sugar beet farmer, and that guy on the bank probably works in the oil field. (*Richland County Recreationalist*)

I saw a guy that poached some turkeys. There is quite a bit of poaching along the river banks. I think it is a lot of spotlighters on Highway 10. (*Dawson County Recreationalist*)

You go down there and there is lots of room. Around here, we don't conflict with any other sportsmen. Just the outfitters. (*Dawson County Recreationalist*)

C. Access Dilemmas: Demands, Limits and Controls

There are very few people in Prairie County that utilize the river. It is very undeveloped. (*Prairie County Recreationalist*)

More people, more and more boats every year. Five years ago, if you went on the river, you might see one or two people. Now, it's not uncommon to run into five or six different boats. (*Dawson County Recreationalist*)

The only time you'll actually see heavy usage of the Yellowstone River is during paddlefishing....I've been at Intake when there's been 300 people. I used to drive people down there to show them. I'd say, 'You want to see idiocy in it's purest form? Come watch this.' Three hundred people [standing] shoulder-to-shoulder. I sit there and just start laughing. (*Richland County Recreationalist*)

You don't necessarily need a man-made ramp. There are places that you can get in. (*Dawson County Recreationalist*)

The use is gradually increasing but that is part of the beauty of the Yellowstone. I have fished in South Dakota, and you look for a place to get in line with your boat. Here, if someone is on our spot, we go somewhere else. There is room for a lot more use than what there is. There will be a gradual increase in use, but I don't anticipate anytime in the next ten years it will increase here. That [concern] is more toward Billings. (*Dawson County Recreationalist*)

An entrepreneurial spirit will take over and [some locals] will say, 'Hey, we'll provide that for you, or at least rent you the equipment and you can do it on your own.' (*Richland County Recreationalist*)

In the fall, here, you'll see lots of out-of-state people. They come here for hunting. You'll see a lot of cars from Minnesota, and Wisconsin. I've seen them from places in Texas—that far away. They come here for the hunting. (*Dawson County Recreationalist*)

Nope, it's getting harder and harder to get on hunting river blocks. A lot of this is getting leased out to outfitters. (*Dawson County Recreationalist*)

[Access for hunting] is getting tougher because there is a lot of competition. Some of the best hunting is being outfitted. They outfit all week and then we go on the weekend and there is nothing left. (*Dawson County Recreationalist*)

Our biggest conflict is [with] the outfitters coming in and hunting the public islands. (*Dawson County Recreationalist*)

There are more boats now than there used to be. There [are] probably six-times more now than ten years ago. (*Dawson County Recreationalist*)

IV. Ideas About Erosion and Rip-Rap

A. Erosion is Not Necessarily a Problem

It's almost a natural...[thing] because that's what the river does. (*Richland County Recreationalist*)

[The course of the river] is always...changing....[It] could change drastically from one year to the next. Every year, it's a change. (*Richland County Recreationalist*)

I don't see erosion as a major problem at all. (*Dawson County Recreationalist*)

We don't really have erosion issues. (*Prairie County Recreationalist*)

Problems? I don't see any problems along the river. It does change a lot. I mean, the channels change, in fact, because of the problem of the river eating away at the banks. (*Richland County Recreationalist*)

If it is destroying somebody's livelihood, acres of some farmland, probably it should be controlled. But, where it is just a natural state, I don't think so. It's really hard to say because I don't own land down by the river. So, to me it's not a problem. But, to people who own land along the river, I am sure it is. (*Richland County Recreationalist*)

I've seen it over the years as I was beaver trapping. I've seen a lot of the islands eroded away. But that's mainly because the beavers build a dam, then when the ice flows come back, they cut it away....They've got a natural tunnel...and when the water gets into there and erodes it out you've got a ten-foot encroachment, and then a big cottonwood will topple right over into the river. (*Richland County Recreationalist*)

We've been through a drought...for the past ten years, so there hasn't been a lot of erosion damage. (*Richland County Recreationalist*)

I guess, it's just a natural part of the river. I don't know what you could do about it. There's some erosion caused by motorcycles on the banks. But I don't think that affects the river at all. (*Prairie County Recreationalist*)

The ice is a lot bigger issue....When we were kids, the ice was one exciting event. We were down there with spotlights. I have seen cows and deer floating on icebergs. (*Dawson County Recreationalist*)

B. Rip-rap and its Effects

You'll see a lot of places along the bank where they're putting rip-rap and taking big chunks of concrete or rocks and throwing them along the bank to keep it from eroding. That's fine with me, I guess. How else you could you protect it? I don't know what they could do. (*Dawson County Recreationalist*)

I've seen several guys in the past put in rip-rap. The way to do it, right, would be to go in with big rock....Some people used to put in metal and cables, years ago, [but] they haven't done that in a long time because that's just an accident waiting to happen....You get that sharp metal sticking up, and then it might wash out, and then someone comes [along] pulling a skier and they get snagged up on it. That's not good. (*Richland County Recreationalist*)

I've seen where rip-rap has been put in, and the river just takes it down after a while. Then you're altering things. I guess, personally, I think it should be left alone because it's still a natural river. (*Dawson County Recreationalist*)

To try to combat erosion, it would basically be impossible. You don't have enough money. You don't have enough men and equipment to throw at it, at the time it needed to be thrown. If you ever looked at the old maps of the river and the meandering lines, it's amazing what this thing has done as far as moving where it wanted to go. (*Richland County Recreationalist*)

V. Sympathies and Concerns Regarding Agriculture

A. Agriculture, Economies and Land Prices

In terms of what this valley is, with the diversity of the wildlife, the irrigation has been a plus. It spreads the water and creates a habitat for wildlife, [more] than if you just had the river. (*Dawson County Recreationalist*)

There is more diversity, up and down the Yellowstone, with the irrigation. There may be some situations that you may need to have fish screens. They put one on the Tongue that saved a lot of fish. In terms of the irrigation,...a very small amount of water that goes out of the river. (*Dawson County Recreationalist*)

I think [the river] is a tremendous asset to Eastern Montana. I think there is room for everybody that wants to use it, as long as they are responsible. Nobody should be shut out of it. I don't think we are anywhere near that type of thing happening....You have private and government people working toward a common goal of responsible usage. (*Dawson County Recreationalist*)

B. Concern: Agricultural Runoff

I think the muddy water that we send back to the river is cleaner than when we got it. (*Dawson County Recreationalist*)

When you flood irrigate—they've got all the statistics—if you don't do it at the right time, you can flood out some of your herbicides, pesticides, and fertilizers. That'll go directly into the river systems....A settling pond, before the water could get [back in the river], would be good. Or, reuse the water again, before you put it back into the system.... The settling pond itself would take care of a lot of problems as far as pollution

going back into the river....If you're a pregnant woman, there are constant warnings....I don't want to see those [chemicals] going back in there at such a high rate. Put it in a settling pond, let it set. Let Mother Nature do her work. (*Richland County Recreationalist*)

When you go into Fallon from here, you will notice all this white stuff along the riverbanks, from irrigation cuts. I guess it is saline. I am sure that's from irrigation. They haven't been irrigating so long, maybe ten years. I never did notice it before. It's almost like it runs out of the bank....[It] kind of seeps out of the side [of the bank]. (*Prairie County Recreationalist*)

Go back to Sidney, go to the west, and climb that hill. You can see the watershed. Look at the top of the watershed. It is an auto graveyard and an industrial site. And that all flows downhill, right through town and into the river. And that's the stupidest place to build something like that. If they'd gone just over the hill they would have been in a bowl, and they could have kept all of that out of the river. But, there it sits....It's 30- or 40-years-old, and abandoned now so nobody's responsible. And there it sits, [our biggest] pollution runoff issue....At some point, the county is going to own it [and] is going to have to find the money to clean up that mess. And, you know, it is only about a mile from the Conservation District office. They have to look at it everyday because they are on that same hill. (*Richland County Recreationalist*)

C. Concern: Agricultural Practices

Most of the landowners on the river bottom are beet farmers, and they'll probably just hang on to that land. Some of them have cut some trees down to get more farmland, which I don't agree with, but it's their business. It's their land. (*Richland County Recreationalist*)

Someday, the irrigation will probably be a problem because they pull a ton of water out at Intake and all along the river. That is going to be a dicey subject because the irrigation is essential to the farms down here....This is the best we've seen the river in years. Just two years ago the river [was] so low that they had to shut down the irrigation....That wasn't that long ago. They had a lot of people nervous that they were going to...shut off 'first rights,' but [they didn't]. (*Richland County Recreationalist*)

Another huge use of this river that we haven't mentioned is agriculture, [and] irrigation. You don't quite notice it [in the spring] because everything is green. But, if you come back later on in the summer, everything along the river is dark green and the hills are brown-yellow. (*Dawson County Recreationalist*)

You'll see this river, around the end of July, get really low. Not only because there is no more runoff, but also because everybody's irrigating really hard. Once everybody's harvested and the irrigations are shut off, the river will actually come up. It's amazing how much water gets used for that, and you don't realize it until that water comes back up after they shut off the pumps. (*Dawson County Recreationalist*)

We are so fortunate that we don't rely on the Yellowstone for...our drinking water. We don't have to ration our water....The people that have a problem are the ones that irrigate out of the Yellowstone. They have had to be rationed in certain years. (*Prairie County Recreationalist*)

VI. Other Concerns

A. Concern: Homes on the Riverbank/Flood Plain

In Sidney, the largest [building] project was the Assisted Living [facility], down by Pamida. That's on a flood plain. I've been in two foot of water, standing right in the middle of that spot. It hasn't flooded since they built it, but I'm not that old. I've been in floodwater right where they built that. That's why we need the Planning Commission. (*Richland County Recreationalist*)

B. Concern: Weed Management

One of the problems really showing up is noxious weeds. I am not sure how to control them, but they are spreading. They are trying some chemicals, but they are expensive and many don't work well. (*Dawson County Recreationalist*)

The salt cedar came from Billings. It was sold as an ornamental. Then the seeds got into the river and everywhere you go it grows along both sides of the river. And it just sucks up the water. It goes into the irrigation ditches and it sucks out the water. They have had a real campaign to get rid of the salt cedar. They have workshops...to teach the farmers and ranchers what to look for. (*Richland County Recreationalist*)

C. Concern: Lost Cottonwoods

[In] a meander-area an island [gets] started by willows, and then it gets taken over by cottonwood. Out in the hills...you don't see young cottonwoods because it is such great feed. Everything loves to eat cottonwood....We will go along this trail [where we] see the old and dying cottonwoods. There is nothing young to replace them. (*Dawson County Recreationalist*)

The trees along the river...are generally cottonwood, and I hate to say it, but it's Russian olive. Russian olive is a noxious weed, and they grow really well down here. (*Richland County Recreationalist*)

Continuous grazing kills the cottonwoods....I have to believe that [after] the big herds of buffalo came through and grazed really hard, they wouldn't be back for several years. That would give young trees a start. (*Dawson County Recreationalist*)

D. Concern: Water Rights

We will have more people moving in, and we will have to deal with water. They've been fighting over water around here for over a hundred years. They will fight for another hundred. And it's going to get ugly....[The headwaters] all start on a reservation, a sovereign nation, so...the reservation is first. Yeah, this is another one of the elephants in the room that you don't want to talk about. (*Richland County Recreationalist*)

I don't know whether irrigation needs to be limited. I guess anybody can irrigate out of [the river who]...wants to. Can't they? I don't know much about water rights. But I know they were getting concerned and [now] everyone has to make out a report for their water rights. Even somebody like me, you know; we depend on shallow wells and that aquifer. (*Prairie County Recreationalist*)

E. Concern: Coal Gasification Plants

Don't let them build any coal gasification plants! Although that sure would help the economy of the town, I guess. I think they were talking about [building one] in Circle. At one time they were talking about right out here...about fifteen miles west. That didn't sound good to me. But, maybe that's progress. I don't know. I think they scrapped that plan. (*Prairie County Recreationalist*)

F. Concern: Moss

One thing I've noticed is, there's moss in the river now. Two years ago we'd get some moss coming down. Then, last summer, it lasted all year. This spring we're not getting the paddlefish. I don't know what it'll be like when the river goes down. That's been a strange change. I can't remember the moss before two years ago. I've fished this river all my life, and I've never got moss on my hook. (*Dawson County Recreationalist*)

Missouri River to Powder River: Residential Interest Group Overview

Fifteen interviews were conducted with property owners holding 20 acres or less of land bordering the Yellowstone River, or within 500 feet of the bank. Names were obtained through a GIS search of public landownership records. These names were randomized within counties. Other people living very near the river and whose primary incomes were not generated by agriculture were also recruited.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|---|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Missouri River to Powder River: Residential Analysis

I. Living Near the River

A. Appreciating Scenery, Wildlife, and Serenity

I have a fantastic view, the scenery is wonderful. In fact, people that come here...say, 'What a beautiful view you have!'....It is just beautiful. (*Prairie County Residentialist*)

Cottonwoods are the classic Yellowstone River tree. (*Dawson County Residentialist*)

Most of the time, when we go out, it's like we own the river. There's nobody else; it's a wonderful feeling. We're very fortunate it's that way....You can just go....If you want to be by yourself, and not [be] disturbed, you can be. And that is very lovely. (*Prairie County Residentialist*)

Our place has been so important to us because of the location. We will have it in our family, always. When [our sons] come home to visit, that is one of the first things they want to do—go to the river. My son was in Korea, and he said he had to go to the river to get some serenity and solitude.... For me, it is the beauty of it, and the peace it brings to just look at the river and the trees and to listen to the water running. It brings a lot of peace to look at the beauty and the scenery....For my husband and boys, it is a daily thing [to go to the river]. My [other] son is home from college, and he will just go to the edge and look for wildlife...They are into watching the wildlife. (*Dawson County Residentialist*)

[If] somebody asks me where I live, I tell them, 'Right on the Yellowstone River.' I probably don't even mention much about the house itself because that is almost secondary to me. Living on the river is very important to me. [As a child], I could throw a rock from my house to the river. I always thought that was kind of neat. I mean, the river that Lewis and Clark used was, basically, a stone-throw away....I just love being on the river. I love getting up very early in the morning, just before light, and getting on this river and not encountering another person. And seeing all sorts of wildlife, deer, turkeys. This winter there were a lot of bald eagles. (*Dawson County Residentialist*)

I like to go for walks....I go around and come down River Avenue. In the fall it is absolutely beautiful; you can hear the geese and it is beautiful. (*Dawson County Residentialist*)

Oh, the wildlife. We can see wildlife all the time....I like nature....There's never a day that I don't get up and look at the river and be thankful that I'm right where I am....It's our 'Little Eden.' That's what we call it. (*Richland County Residentialist*)

We...say that the river is in our backyard, and, although it is the backwaters of the river,...[we have direct] access to the river. Our boys were nine and ten when we moved here. There are two acres. (*Dawson County Residentialist*)

[The river is]...quiet. Peaceful. (*Richland County Residentialist*)

B. The River as Taken-For Granted

You just take it for granted....Sometimes you are going across it...and it is frozen over,...[and you] wonder if it is going to break up....There can be big chunks of ice that come up along the river....Or, you notice when it is really low. Or, 'Boy, the river is really high'....It's just a natural part of the conversation...You don't even realize it. (*Dawson County Residentialist*)

I've always lived by the river...I think that I have taken this location...for granted. Where I work, there was always something about that town that seemed to be missing. And, about a year or two ago, I realized...they don't have a river. (*Dawson County Residentialist*)

C. Keep the Yellowstone Natural

I don't see any problems with the river if they don't do anything with it. Don't mess around with it. Leave it as a free-flowing river....It's got a couple of diversion dams on it, and they are probably needed for the irrigation, but...I wouldn't want them to build them any higher.... I never want to see the river blocked off. Never. (*Dawson County Residentialist*)

We appreciate the fact that [the Yellowstone River] is a free-flowing long stretch of... water, which is so rare....We'd hate to see anybody improve it for irrigation or something by throwing [a dam] across [it]. (*Prairie County Residentialist*)

The river is going to take its course. I don't think man is smart enough or huge enough to change it. They have poured millions of dollars into rip-rap on the Missouri, and it has failed. I hope they never do it in the Yellowstone....Let Mother Nature do its thing, and it will be fine. It always has been. Don't try to change it. (*Richland County Residentialist*)

[Leave the river] just the way it is...I just want it the way it is. (*Prairie County Residentialist*)

I am really conservative, I guess. If I had my way, I would like it [the Yellowstone River] to just stay the same. I wouldn't want any dam, or anything, to ruin the beauty of it. (*Dawson County Residentialist*)

If we could just keep humans far enough away from the river, there would be no problem. Let the river do what the river wants to do. (*Prairie County Residentialist*)

I don't believe we have any rights to do anything to the banks. I am in agreement with the Fish and Wildlife, there....Keep it a wild river. (*Dawson County Residentialist*)

D. The River as a Shared Element of Life

I hear boats going up the river once in a while....For years there was a houseboat that would park down here. I would wake up in the morning and see it, then by noon or so it [would be] gone....I sit here and drink my coffee, and look out, and see the houseboat. It is just kind of neat. Just the other day, there was a boat that went up the river. And, of course, they had to come back, but I didn't hear it. It depends on the direction and strength of the wind...There is fishing and agates....A couple comes from up west in the spring and fall to go agate hunting. (*Prairie County Residentialist*)

My husband and his brother had their picture taken two years ago, by [the local newspaper], and when it was printed it was capped, 'Fishing Buddies.' This is one of my brother-in-law's favorite pictures. I had it...framed, and gave it to him for Christmas....It is hanging in his living room and I know he just cherishes that picture. (*Dawson County Residentialist*)

I always hear people say, 'Did you notice the river when you crossed the bridge?' It seems like it is a big part in everybody's life. (*Dawson County Residentialist*)

There is not that many people on the river; it is a muddy river...There is not that much excitement on the river, [they are] just catching fish. (*Dawson County Residentialist*)

People here enjoy going up the river and putting their boat in, and floating down. It takes two or three hours to float. It is just beautiful. You see crops, you see deer, you see beaver, you see rabbits. (*Dawson County Residentialist*)

Another significance that [the Yellowstone River] has for me is that both my husband and I were baptized in the Yellowstone. And...[so was] our daughter. (*Dawson County Residentialist*)

It is a source of water for anything and everybody that wants it. Right now, I live on my son's irrigated farm. It is his livelihood. We need the water. (*Prairie County Residentialist*)

That's recreation, you know. A lot of them, down on this end, hunt agates....After the river goes down, and after you get a few good rains, you'll see [people] running around out there picking up agates. (*Richland County Residentialist*)

I own a farm, and I use the river for irrigation. In town, we drink the water from the river. I do recreate on it; we boat and fish and to a certain extent I have hunted on it. It is pretty important to my family's livelihood. (*Dawson County Residentialist*)

E. Ruralness of the River

We lived in a small house in town, then we decided we would like a place in the country....I am two-tenths of a mile from the river. I am two miles from town and my closest neighbor is a quarter-mile [away]...It is somewhat isolated, but you are still close to town. (*Richland County Residentialist*)

I just moved down here, and I have enjoyed every minute of it because I love to garden and to be outdoors. (*Prairie County Residentialist*)

I like wildlife and scenery....I can sit on this deck, right here, and I can't see a neighbor. So, if I blindfolded someone and put them on the back deck, they might as well be out in the middle of wherever. You can't see anybody. (*Dawson County Residentialist*)

It is the best location in town. We like it. There is nobody that can live across the street from us. There is no place to build and so it is open over there. You see a lot of deer over there. You see carp. (*Dawson County Residentialist*)

With this lot, no one can build in front of us....Your house may not be so valuable but your lot is worth a lot of money. (*Dawson County Residentialist*)

II. Eastern Montana and Residential Life

A. Eastern Montana

A friend of mine said, 'The real Montana begins just east of Billings.' (*Prairie County Residentialist*)

My husband and I both love Eastern Montana. That keeps us here. We really believe in the stability of being someplace and staying there. He was born on a ranch and he stayed until he got married. I moved every two years with my parents for the geographical cure. I don't think that was a good thing. I like staying in one place and getting established in a community. (*Dawson County Residentialist*)

I don't know if [being close to the river] was one of the things that weighted heavily when we bought this....Being close to the river is a perk. What weighted heavily was water source, location, accessibility, things like that. And the fact that [the property] did have trees, which is rare in Eastern Montana. (*Prairie County Residentialist*)

I do always say that we live by the river....And that Eastern Montana [has] a special beauty that you recognize all the more when you live here. People who come from out-of-state usually think of Montana as the mountains. It's advertised as a mountain state. But Eastern Montana does have its own beauty, and a part of that is the river. (*Dawson County Residentialist*)

Eastern Montana can change from one mile to the next. You can go from grassland, to mountains, to the badlands, really fast....All of the sudden you can have these huge gullies and crevices. We live in the Yellowstone Valley, which is...[irrigated] , and a large part of the valley is dependent on the river because they raise sugar beets. They get their water for the farming out of the river. They get their water at Intake. (*Richland County Residentialist*)

I think, as with everything in Montana, the real challenge is going to be balancing the political might of the more densely populated [areas] with the relative political nothingness of people that are on this huge stretch of the Yellowstone. What they do up there, is going to make-it or break-it for everybody downriver. (*Prairie County Residentialist*)

I'm comfortable living here. I like the view. I like the neighbors. I like the neighborhood. I think they all feel the same way about the neighborhood. There is no place nicer than this, really, unless you build a fancy home up in the hills. I am content here....It's quiet along the river. There is no reason to get excited. (*Dawson County Residentialist*)

B. Development Possible, But Unlikely

Oh, yeah, it's coming. It's going to come. There's a lot of people in the big cities that aren't going to stay there forever and where else are you going to go? Who has places like this? Not that growth is *going* to be here. (*Richland County Residentialist*)

The lady down the street knows that someday someone will buy her double lot and build...a show place, or a mansion....[Her house is] not a great house; it is a small one, and the lots along the river are beginning to be prime property. The value of it is really going up....I guess, that's progression....In ten years, if the economy keeps up, and the housing market stays like it is...I anticipate that some of the older homes will be torn down and bigger ones, nicer ones, [will be] put in. (*Dawson County Residentialist*)

Where we are, right here, sure, there might be some more development....More development might be nice. We need to stimulate our economy. (*Dawson County Residentialist*)

In a way, we are booming....There aren't a lot of available places to live. The oil industry is sort of coming back. You know, the pendulum swings and we are on the upswing, now. (*Dawson County Residentialist*)

We have seen some population increase. We are having a housing boom. Anyplace they can build, they are. If they can find a lot, they are building. That is because of the oil boom. (*Richland County Residentialist*)

We have this little oil boom....They call it a boom, but most people are not in it unless you are working for the railroad. (*Dawson County Residentialist*)

The original Montanans...like to see the jobs come in, but they don't want to see the people....Years ago...you could drive...in the hills for hours and all you'd see was one old farmer going down the road...Now, you see truck after truck [because of the oil businesses]....I guess, that's what they call progress...At times, in certain places, it brings lots of jobs, but it takes away...freedoms and wide-open spaces. (*Richland County Residentialist*)

Quite honestly, it is pretty tough to...buy land on the river...People with lots of money come in and ratchet-up the price. (*Dawson County Residentialist*)

Western land prices went up ten, fifteen, twenty years ago. And they just kept moving eastward. Now, it's getting expensive to buy land, here. (*Dawson County Residentialist*)

I don't see residential development here. This is agricultural out here, and irrigated land is still fairly expensive. It makes purchasing rural farm land for a house cost-prohibitive. (*Richland County Residentialist*)

I think, probably, the biggest change we'd see is a sudden change in agriculture or ranching. That would be the biggest change. I don't think you'd have to worry about housing. (*Dawson County Residentialist*)

[I don't want to see] too many people. (*Prairie County Residentialist*)

C. Conflict Not Present

I think there must not be [any tension between user groups]. Otherwise, the *Ranger Review* would be reporting it. (*Dawson County Residentialist*)

Fishing, rafting, boating, agate hunting, I guess that is pretty much it....I don't think [there is conflict between groups]....I know that on the Big Hole River, agriculture and fishing were at odds, but that is a smaller river. (*Dawson County Residentialist*)

I think [sharing the river] works fine,...and knowing the people that live here, yeah, I think it will stay [fine]. (*Richland County Residentialist*)

We do not have a big population in this area, so we do not have very big pressure on the river from recreation. (*Prairie County Residentialist*)

We don't have the amount of people that they do on the upper part. It's yet to come. (*Richland County Residentialist*)

Nobody complains about anything. (*Dawson County Residentialist*)

D. Problems with Public Access

I don't think [the public access points] are very good....Well, the road is better now that it is gravel,...but I wish there were more fishing accesses....At one, down toward Sidney, the roads are bad with deep ruts. (*Dawson County Residentialist*)

You can always have more [public access], but we're very grateful that we have what we do have. (*Prairie County Residentialist*)

I tend to have to go ask farmers or ranchers if I can go through their land to get to the river....It would be nice to have an access every ten miles....I think the Fish and Game should work harder to do that. You know Eastern Montana tends to get forgotten. I guarantee you, there isn't ten miles in the western part that doesn't have an access. That is conjecture, but...I would say access is more of a priority there than it is here. (*Dawson County Residentialist*)

The Lewis and Clark Center [includes] an access point. It's a boat ramp. They put it in so people can have access, and you can't blame them because the public has to have access. It's their waters. (*Richland County Residentialist*)

Whether you are on the edge of the river, or on...the water, if you are going to go and cook a hot dog, that is fine. Then bury your fire pit, and take your trash out. No one will know you have been there. Our whole population is a little lax on that...My brother owns farmland with river bottom. He was very good about letting people fish and hunt. Then, a couple of years ago, he had to tell them they can't hunt anymore. They were cutting fences, leaving gates open,...ripping out water-tanks and pumps....If you have to go get a deer with the four-wheeler, fine. Just don't tear everything up. (*Richland County Residentialist*)

We do have trouble with...a fishing access right across the river. We get a lot of parties down there. You can really hear them in the summer. We do have people that go down below, and trespass. This winter, I was watching and I saw a pickup stop, and they got out and they threw some...dead animals....People abandon animals, here, all of the time....I don't like the abandonment. (*Richland County Residentialist*)

I let people use the property, if they ask....If they come without asking, I will boot them....I think the high water law is right. If you can get access to the river, you can come up in a boat. I don't think it is bad, unless they start leaving trash or messing with my stuff. (*Dawson County Residentialist*)

People [often] trespass on the land across the river. They go to fish and to ride motorcycles, and they are pretty hard on the river environment....The game warden...is out here patrolling a couple of times a week....We have a real problem with four-wheelers and motorcycles on the river. We end up with a bunch of tracks and ruts [that] encourage more people to do the same. (*Richland County Residentialist*)

Have respect for the land. I love to see people use it; I am a fisherman myself, but don't go in and tear the place up and make it unusable for everyone else.... You have to take care of what is there, or it won't be there. (*Richland County Residentialist*)

I wish everybody using the river could be as mindful of it, and as careful with it, as we try to be in our family.... The river is here for everybody to enjoy, but you've got to use it with sense. It's just river-bottom land.... Mostly, if people are courteous enough to ask, they're allowed [access], but if they just bulldoze their way in, and don't ask, they probably get told to leave.... Come fall, [we use] orange paint... because our property borders the elk island and people are allowed to hunt in there, but they like to come across, onto ours. So, we go along and put up orange paint. (*Richland County Residentialist*)

People aren't taking care of the recreation areas as well as they used to.... You see more littering in public areas, and we have seen... carcasses in the river. That isn't a good thing when you are trying to enjoy the river. (*Dawson County Residentialist*)

The access is getting pretty tough now days... [because of] greed.... Everybody wants money to go across their property.... Or, if you find places to go... hunting or fishing... that are accessible, everybody's there. (*Richland County Residentialist*)

It is more relaxed and friendlier than near Billings. People are more apt to let you hunt or fish. You get to Huntley, or closer to Billings, and people are in more of a hurry, less friendly, less apt to let you hunt... [Around here, if you want to hunt you need to] find out... the landowner's name... and call them up. (*Dawson County Residentialist*)

There are some people that won't let you on their place. I've seen, 'No Agate Hunters' signs. (*Dawson County Residentialist*)

E. Hunting Clubs' Change the Public Access Context

Hunting along the river has made some of the land extremely valuable... This is considered prime hunting country.... Buckmasters is over there; the Sierra Club is there. They bought huge ranches just to have hunting.... The land used to be a lot more open, you could talk to farmers and they would let you go fishing. It is padlocked and fenced, now.... To them it is valuable, and... it is not in their mentality to just let anyone get on their place. (*Richland County Residentialist*)

Buckmasters [is] a big organization that bought a ranch.... They out-bid my son-in-law [who]... was willing to pay \$600,000 for it. [Buckmasters] was willing to pay more.... Prices are getting unbelievable. (*Dawson County Residentialist*)

There is a hunting lodge downstream, but they are there two months of the year, and the rest of the year it is farmed.... I see that as a negative. (*Dawson County Residentialist*)

We're across the river from Buckmasters....And, of course, they are private and they bring in big hunters, and what not. I think they drive a lot of the deer over here, but we've never had any problems with them coming across the river. They stay on the other side. (*Richland County Residentialist*)

F. Looking to the Far Management Horizon

I have seen an increase in boat traffic. When I was a kid, you never saw a boat....[Now] I think there are fifty to sixty people in town that have jet boats. I have seen jet skis on the river, and I even saw somebody waterskiing, which I had never seen....I worry about these guys with jet boats....I think they need to put a slot limit on sauger....You can't keep a fish within the slot, but if [the fish] is smaller, or bigger, you can keep it. They do that to protect the reproducing fish. They should do that for sauger and walleyes. (*Dawson County Residentialist*)

I have no objections to recreational uses of the river, but [when you start] stacking people that deep, you start running into problems....I wouldn't wait for it to get that thick. I suggest that people start getting used to [a permitting process] right now. (*Prairie County Residentialist*)

I'm not aware of any management, and I'd like it to stay that way. The river manages itself very nicely. The irrigation situation depends on the rainfall and the snowfall, and I think there is adequate water. (*Prairie County Residentialist*)

I know that whenever you've got people controlling something,...somebody's going to screw something up. It's a way of life, you know. (*Richland County Residentialist*)

I think [the river] is big enough. Although I would hate to see it...managed, there is stuff that goes along that a person doesn't like....It would be tempting to patrol areas that have a lot of people, just to make sure that people weren't littering. (*Dawson County Residentialist*)

III. The River as a Physical Element

A. Living with the River

It just depends on how that ice sticks on the river...and [how] the water's going to go to get around it...It's a challenge when they get a good snow pack in the mountains, then it warms up fast, the valley gets flooded...[and] down this end, it's worse because you have the two rivers coming together....And it's never the same twice because of the erosion and the building of sandbars in different spots....It's a new experience every time. (*Richland County Residentialist*)

[The river] is brown about half the time. It is not a river that you want to mess with in terms of...swimming. You have to respect it. It is a pretty wild river. (*Dawson County Residentialist*)

Every time I look out I see something different....Just like last spring, when we had the heavy rain, I walked to the back of the house and heard this horrible [sound] and I thought, 'What was that?' And, I looked across the river and all those drains coming off the hills were just running wild....They roared. White water...[was] coming down those draws and hitting the river. I had never seen that before. Everyday, or every year, there is something on the river I haven't seen. It was phenomenal. I just stood there and watched it. (*Prairie County Residentialist*)

You should have heard [the ice] when it broke in the night. It was so big and thick, and it would clash and bang together. It was kind of frightening, really. We would go out on the old bridge...[and] watch ice go under it. You'd feel it shaking, and we sat up most of the night. It would come up pretty close to the banks. (*Dawson County Residentialist*)

Anything down below, there, and even across the river, would be on the flood plain. So, it's not likely that I will be looking across at some houses, anytime soon. You just can't build....anything on the flood plain. (*Dawson County Residentialist*)

B. Stories of Destruction

Land right along the riverbank comes and goes....The river eats in and the river builds back out....One time, there was nothing left, maybe five acres. The next time, it's built back out and the river works on the other side. And that's what it's done over the years. (*Richland County Residentialist*)

When you get a normal piece of the bank that falls off, it doesn't really change all that much. But, I've seen islands appear and disappear. It depends on the way the ice comes....I know, one time, we hunted [on] an island that must have been 200 to 300 acres, and then, a couple of years later, that island was gone. Now, it's back again. (*Dawson County Residentialist*)

Once you get below the bridge, you have agriculture land. We get floods, but [you don't leave] anything of any value...down in the meadow. I have seen...[water] cover the whole thing. It is kind of scary, but kind of neat. (*Dawson County Residentialist*)

[The Yellowstone River] cleans itself up when the ice goes out....The most pristine time of year for the river is after the ice goes out. It is at that point it really cleans itself up. We call it the June rise, and it can be anytime from May, on. We call it that because the ice is going out and the snow is melting. That is the most dangerous time to be in, or on, the river....[The river] is housecleaning. (*Richland County Residentialist*)

I'd like to see it stop coming across, here, because sooner or later it's going to be right back in the prehistoric river, which is just below the hill....Several years ago,...when the river went out, it caused [an ice] jam down here on our property, and when it does that, it backs up in here. I've seen this whole thing banked-full of ice in less than two hours, ...and the ice was hitting the big trees to the point where it knocked dishes down in the cupboard. (*Richland County Residentialist*)

There have been floods when the river backs up. Ice jams in the river in the spring....[and] the river can't go. It backs up. The bottom field has only flooded once....We cleaned up silt and bark and trees, and the alfalfa kept on growing. (*Prairie County Residentialist*)

Sometimes, when the river goes out in the spring, it will either slush away or just melt away in the middle of the night. Sometimes, it goes out faster and the ice doesn't get a chance to melt. You can hear the crashing and booming of the ice. I have seen huge chunks of ice that end up on dry land....Since we have moved here, it has just melted away in the middle of the night and hasn't done that. (*Richland County Residentialist*)

C. NIMLYs, 'Not In My Lifetime/Years' (Folks convinced the river can change, but...)

On my place there is a big meander, and it is starting to cut right across there. It wants to form a sandbar here. Maybe in 100 years or 200 years it will go right across here. (*Dawson County Residentialist*)

The changing of the channel, at least in the areas that I have looked at, has been so infinitesimal. There's no way in the world, unless we get a tremendous deluge like the forty-day rain, that the river could change enough to do any actual damage....You'll find a farm in an aerial photograph, or you'll find a piece of land that came to one farm when it was taken off the other side....The biggest one is near the town of Savage. The river changed channels there, probably 150 years ago. It moved about half a mile. (*Prairie County Residentialist*)

The Yellowstone River hasn't changed much since it formed. It isn't like the Missouri that can cut 400 to 500 yards out of a bank in a year. You don't see that here. (*Richland County Residentialist*)

I am getting to the age, now, that as long as I live here, it will stay. But, I don't know what they will do in the future and I would hate to see it change. (*Prairie County Residentialist*)

The way the bank is situated, it tends to flood further south or on the other side. (*Richland County Residentialist*)

D. Dike Protects Against Flooding (Probably)

We've got these flood plain regulations that'll take care of it, if they're enforced. (*Prairie County Residentialist*)

Well, that is in the flood plain. They knew that when they built. They put that little bit of a dike up, and they think that is going to hold....[I've seen the river] almost go over the road when it gets really high. (*Dawson County Residentialist*)

I am almost positive that we are not in the flood area. Although, one spring it did almost come over the bank....It was that far from....running over the bank. It will probably happen again one of these years. (*Dawson County Residentialist*)

They built a big dike to protect the western [end]. Up to then, ice would come down here and flood...They still have restrictions on building on the western [end]. If they raise that dike too much higher, then you've got the danger of the water filling the football field. Ever since they dammed off the Big Horn River...we haven't had quite as much water,...[but] every spring you have to worry about the ice jams up on these corners. (*Dawson County Residentialist*)

This I-94 bridge is the dumbest thing ever. When they built it, they made a place for ice to jam-up. There is no place for the water to go, and that dike is not up to specs....If the money was there [to fix the dike], it would be fine. Where are you going to come up with the 100 million dollars to do that? If they would have built that bridge high, all the way across so the water could flow freely, the dike would be high enough. (*Dawson County Residentialist*)

We haven't had any problems. They evacuated us once because they thought the river was too high. It didn't erode anything. It took out some trees, but it was a natural clearing. (*Dawson County Residentialist*)

E. Building in the Flood Plain is Foolish

I always thought that any damn fool who wants to build on the river bank, sticking his neck out, if he falls in—tough shit-ski. He should know better. It's like those guys in California that build up on a mudslide; they ought to know better. (*Prairie County Residentialist*)

People know that river [will flood],...that is why we didn't look for a house over there....I grew up seeing that whole area under water. So, I know what that river can do. I wasn't about to buy a house over there. Now, those stores have been built over there, but we wouldn't buy a house over there. (*Dawson County Residentialist*)

People are starting to buy property along the river, but I think people are smart enough not to build in the flood plain. (*Dawson County Residentialist*)

You would be stupid to build on the flood plain....Down here nobody is going to develop in the flood plain because they have seen what can happen. (*Dawson County Residentialist*)

They can build where...they want to. But, if they get flooded, that's their problem....If you want to be stupid enough to go down there on a sandbar, don't come crying to me....When they buy these little parcels,...it should be right on their deeds that this property is floodable....If they would have studied it, they wouldn't have built there to

start with....Take the liability off me....You'd have to be a damned fool to build a house on a place like that to start with. (*Richland County Residentialist*)

The insurance companies are damn fools to insure a house that's built too close to the water. I guess they deserve to pay. (*Dawson County Residentialist*)

F. Rip-Rap is a Known Solution

I think they get concerned [about erosion] and do stuff for it. I know some people put in rip-rap....If it is going to control the soil, then good. I might be speaking out of turn, but that is the way I look at it. (*Prairie County Residentialist*)

It seems they have places where [the city] dumps concrete, and I am sure that is for erosion....I think it serves a purpose. It gives them a place to put the concrete, and it doesn't look bad. (*Dawson County Residentialist*)

There isn't too much to do about [erosion]....They piled debris from the old high school right here on the riverbank and that is what protected our riverbank. It stays pretty permanent, and when the water comes down, it keeps it out. (*Dawson County Residentialist*)

We do have erosion. This riverbank, where you noticed all the brush, if we hadn't been putting [brush] over that bank for thirty to forty years, that bank would be over here in the middle of the street. [The brush] stops the erosion....They will have to do something about the bank, down here. [With] another big, heavy rain...it is going to wash it out. (*Dawson County Residentialist*)

If you look over the bank [you'll see where] I have to reinforce it because it has sloughed-off into the river....I've actually put a retaining wall behind it to shore it up.... Other people have done the same thing....Some people have put big rocks close to the bank to shore it up....I'd be overjoyed if somebody would come in and deal with it in a more professional manner. I don't know who would be responsible for that. I guess, since it is on my property, it is my deal. (*Dawson County Residentialist*)

I don't want that bank to wash away....So, I put in a lot of Daylilies, to hold the soil. They are real good to hold the soil....Most of these people cut the trees down and put in grass, but the tree roots hold it so that is why I wasn't about to have my trees cut down. (*Dawson County Residentialist*)

[We would like to] do some rip-rap, but we're not allowed to do that....Fish and Game [won't allow it]. (*Richland County Residentialist*)

G. Rip-Rap and the Potential for Unexpected Consequences

Rip-rap works pretty-well...I think the river is going to do what it is going to do....I could rip-rap this, and I have always heard that if you do that, it will take it someplace else. (*Dawson County Residentialist*)

That's another problem; you rip-rap on one side, and you're shoving that water back over on another guy. He's going to be a squawking....It wouldn't do...[anything] to the rivers at all, but it would take away from the natural beauty of it. I mean, you drive down the river and it is all rocks, which aren't supposed to be there, you know. (*Richland County Residentialist*)

IV. Concerns

A. Water Quantity

We should figure out a way to replicate whatever the river flow was at that time, [Lewis and Clark's time]. So, it should go up in the spring and down in the summer. Whatever it takes to maintain that flow—let the cards fall where they may....Whoever gets the water, gets the water. You don't artificially give more water to one person because you hold back water [behind a] dam....Obviously, it has implications for energy generation, and recreation, and floating barges downstream,...but I think that is the only fair way to do it. (*Dawson County Residentialist*)

Another one is the lack of water....By August, you can wade across the river, here.... There seems to be less water, a lot less. (*Richland County Residentialist*)

[The river] gets pretty low and the boats get hung up. It becomes a ford right here. (*Dawson County Residentialist*)

[River depth fluctuates] after the June rise....You can't get around in the water...[because] you might have ten foot here and you might have two inches over here. So, it's constantly changing and tomorrow it might be just the opposite, especially down here where there's so much sand and mud. (*Richland County Residentialist*)

I would put a moratorium on any more irrigated lands, period. No exceptions,...because there's too little water, and too much land. Irrigated farmers...take as much water as is legally available, and sometimes more than is legally available. And, as time goes, the cities and towns that take water from the Yellowstone are going to be demanding more and more. That, also, has to be stopped....We, for example, take water from the Yellowstone and from a well. Well water, especially on the scale that is used in a municipality, is extremely expensive. This is one of the things that people are going to have to get used to: paying for water in the cities. And, when I say pay for it, I mean a reasonable amount. (*Prairie County Residentialist*)

That goes on every fall. When the river gets low, and the irrigators start to run out of water, they start citing water rights. They get to hollering and screaming at their senators or representatives, 'I won't vote for you next time if you don't get me some water.' (*Dawson County Residentialist*)

Without that Fish and Game reservation, I'm afraid that irrigation would have sucked it dry....I've seen a couple of rivers that have been de-watered, and they're not good. (*Prairie County Residentialist*)

Most important, to me, is the water supply for the town. That is where we get our water....The most important thing is having water available for our household use: for our lawns, gardens, trees. (*Dawson County Residentialist*)

Domestic use [is a priority],...but the first priority, under any conditions, are soil, water, air, people. That, or you're going to have to start shipping people off the planet, and, at this point, that's not practical. (*Prairie and Dawson Counties Residentialist*)

B. Water Quality

The irrigation...in this area has been here since the '30s....Stop and think of all the water that's being diverted out of that river from up around Columbus...clear to the mouth of the river down, here. How many gallons are being pumped up on the ground?...Look at all the contamination and pollution from all the pesticides. (*Richland County Residentialist*)

I [am concerned about] pollution [in the river], because it is our water source. You know we need to protect our rivers. If there is an industry that comes in, you can't let...[the river] be polluted. (*Dawson County Residentialist*)

I don't know much about this methane, but I sure would hate to see it come in and ruin things.... If they let it run down the river and we can't use it for our crops, or can't use it for our livestock, or it will kill our wildlife—that would be horrible. What good would the river be? (*Prairie County Residentialist*)

[The] farmer and rancher,...he's irrigating...and uses it for his income....They're going to have to find different ways to irrigate....Their flood irrigation will be a thing of the past... [We can't] have [a farmer] going out here and irrigating a field at four o'clock in the morning because 'Oh, God, I don't want to get out of bed and change my water.'...That water's going back to the river with pesticides and fertilizers....There's millions and millions of gallons of water spread across the ground, and a lot of it reaches the river again. (*Richland County Residentialist*)

One of the biggest pollutants is the coalbed methane thing....The water that comes up out of there, they pump into the rivers. The Tongue is one of the biggest ones they're pumping into, now,...and the Tongue empties into the Yellowstone. (*Dawson County Residentialist*)

C. Regulations Seem Unfair

The latest big flap was when Fish, Wildlife and Parks wanted to close a recreation area near town—that really upset a bunch of people. Also, the policies [for] out-of-state

hunters and their permits have been quite detrimental to Fish, Wildlife and Parks. The consensus around here is that Fish, Wildlife and Parks is looking for more finances,...to build their own little empires....For a while the ratio of out-of-state permits to in-state permits was too high. The proportion of hunting license fees for in-state versus out-of-state were out of proportion, also. (*Prairie County Residentialist*)

The biggest problem here is the diversion dam. They are having a big controversy over the Pallid sturgeon. It is an endangered species...and they are talking about a fish bridge for the sturgeon to be able to go up river....There are some conservationists that would like the dam to go away, but they rely on the dam for irrigation....Intake doesn't allow the fish to move upstream and spawn where they need to....And Pallid sturgeon and sauger get sucked into the canal....They are trying to get big fish screens in front of the canal so the fish can't get into the canal....Another plan is to have a lift station that would fill the canal....If those two plans don't work, they plan on digging this huge canal. For them to do that, they would have to run a canal that was 60 feet deep....Logistically, it is such a mess....It seems the fish ladder is more cost-effective....You'd have to have some pretty impressive infrastructure, ice gates and tree gates to keep the junk out of the canal,...and you would have to have a tremendous amount of dirt and...an easement and...bridges....I just can't see it being very feasible. I look at the map and it seems the river doesn't drop that much. (*Dawson County Residentialist*)

Stop and think of everything that the government does...Fish and Game, the whole shooting match. [They tell you,] 'There's a place here for you to go.'....That way they can funnel you down to certain spots, and it's easier to keep track of you. Stop and think about it...Just like Fort Peck Dam....There's...something like 2000 miles of shoreline,...[but] they probably got five or six places you can go to get on that lake. (*Richland County Residentialist*)

We don't, specifically, raise any deer or elk, but a lot of the farmers and ranchers do and they can't get a permit to shoot a deer on their own land. (*Prairie County Residentialist*)

D. Wildlife and Insects as Nuisances

Mosquitoes, bats...there are a lot of bats along here by the river....And there are a lot of deer that come up the river and they eat the evergreens and tulips. (*Dawson County Residentialist*)

[Geese] are dirty, and they eat the crops, and there are too many of them. Fish and Game should start controlling them instead of us....The deer are very destructive. I used to think they were cute, but now I don't want any deer around. They get in your gardens, and flowerbeds, and destroy things....This is here for beautification, not for the deer. (*Prairie County Residentialist*)

We get a lot of wildlife and have trouble with deer. They eat my trees, and eat [the food in] my bird feeders....It is really hard on the young trees. (*Richland County Residentialist*)

The mosquitoes...., We have always had a lot of mosquitoes. (*Dawson County Residentialist*)

During the spring, I am hesitant [to go to the river] because there are a lot of ticks. (*Dawson County Residentialist*)

I killed a snake this morning. I think you tend to have a lot more critters. Some of them you want, some you don't. I actually have deer in my yard, probably, four days out of the week. I have squirrels and all sorts of birds. I think snakes and mosquitoes, probably, are a little worse, here. (*Dawson County Residentialist*)

E. Exotic and Invasive Plants

We worry about the leafy spurge and the control of that. I would probably want to have some control of that. (*Dawson County Residentialist*)

Yeah, the islands in the middle of the river are just yellow with leafy spurge, and nobody's doing anything about it....It comes across with the birds, and it's almost impossible to keep it under control with spray....[Besides,] I don't like spray....There are beetles that the research center [released],...but I don't think that they were very successful. They probably didn't plant enough....There's another weed, too, that comes whenever we have a flood. It has a real velvety leaf, like the Lamb's Ear, but it has a tall flower spike. It can be really bad, but if you stick a shovel into it, you can pretty-well get rid of it. (*Richland County Residentialist*)

Last year, I noticed an awful lot of moss. More than I have ever seen. There was a lot of moss early on this year, too. I know our pump screens were full, and anytime we fish it is terrible....Last year it persisted and never got any better. Usually, by the time it gets cold out, that moss would start breaking up, but we were out there in October and it was still there....Some people say the water from Yellowtail [causes] the moss. (*Dawson County Residentialist*)

F. Out-of-Staters Change the Local Context

Out-of-state people are driving up prices and changing the politics...the Ted Turners tend to have a political agenda. And, in some instances,...[they are] successful. (*Dawson County Residentialist*)

We talked to our friends from Western Montana, and they keep telling us about all the Californians coming in. A lot of them are good people, but the problem is they left California because they had problems there. They bring their problems to Montana. They still have their problems and now we have them. (*Prairie County Residentialist*)

Instead of a lot of the river frontage being locally-owned or farmer-owned, there is a big chunk that is being bought by out-of-staters....We are not that concerned with the river's impact on people as much as we are concerned with the people's impact on the river. If

they don't take care of it, it will continue to get worse. We have had a lot of people come by here, from all over the place. I had a guy from Minnesota stop one day and want to hunt turkeys in the yard. (*Richland County Residentialist*)

G. Safety: Debris and Undercurrents

This river is really dangerous. A young man was killed, right around here. He was walking and the island disappeared, out from under him.... There must have been a real pull underneath. My dad told me, years and years ago,... 'don't swim in that river because it has undercurrents and undertows, and it will take you.' (*Dawson County Residentialist*)

You don't get a whole bunch of boaters because the river right here is dangerous. Sometimes, you can really get in trouble out there because of how fast it is, and snags and sandbars.... and undertow. (*Richland County Residentialist*)

Yellowstone River Cultural Inventory—2006

Part II: Powder River to Big Horn River

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Yellowstone River Cultural Inventory--2006 Preface

The Significance of the Yellowstone River

The Yellowstone River has a long history of serving human needs. Native Americans named it the Elk River because of its importance as a hunting environment. William Clark explored much of the river in the spring of 1806 and found it teeming with beavers. By 1906, the US Bureau of Reclamation was sponsoring diversion projects that tapped the river as a source of irrigation waters. The river then enabled “twentieth-century progress” and today it supports many nearby agricultural, recreational and industrial activities, as well as many activities on the Missouri River.

Management of the shared resources of the Yellowstone River is complicated work. Federal and state interests compete with one another, and they compete with local and private endeavors. Legal rights to the water are sometimes in conflict with newly defined needs, and, by Montana law, the public is guaranteed access to the river even though 84 percent of the riverbank is privately owned.

Interestingly, in spite of the many services it provides, the Yellowstone River in 2006 remains relatively free-flowing. This fact captures the imaginations of many people who consider its free-flowing character an important link between contemporary life and the unspoiled landscapes of the Great American West. As a provider, as a symbol of progress, as a shared resource, as a management challenge, and as a symbol of our American heritage, the Yellowstone River is important.

Purpose

The Yellowstone River Cultural Inventory—2006 documents the variety and intensity of different perspectives and values held by people who share the Yellowstone River. Between May and November of 2006, a total of 313 individuals participated in the study. They represented agricultural, civic, recreational, or residential interest groups. Also, individuals from the Crow and the Northern Cheyenne tribes were included.

There are three particular goals associated with the investigation. The first goal is to document how the people of the Yellowstone River describe the physical character of the river and how they think the physical processes, such as floods and erosion, should be managed. Within this goal, efforts have been made to document participants’ views regarding the many different bank stabilization techniques employed by landowners. The second goal is to document the degree to which the riparian zone associated with the river is recognized and valued by the participants. The third goal is to document concerns regarding the management of the river’s resources. Special attention is given to the ways

in which residents from diverse geographical settings and diverse interest groups view river management and uses. The results illustrate the commonalities of thought and the complexities of concerns expressed by those who share the resources of the Yellowstone River.

Identification of Geographic Segments

The Yellowstone River is over 670 miles in length. It flows northerly from Yellowstone Lake near the center of Yellowstone National Park in Wyoming. After exiting the park, the river enters Montana and flows through Paradise Valley toward Livingston, Montana, where it turns eastward. It then follows a northeasterly path across Montana to its confluence with the Missouri River in the northwestern corner of North Dakota.

Five geographic segments along the river are delineated for purposes of organizing the inventory. These five segments capture the length of the river after it exits Yellowstone National Park and as it flows through eleven counties in Montana and one county in North Dakota. The geographic delineations are reflective of collaborations with members of the Yellowstone River Conservation District Council and members of the Technical Advisory Committee and the Resources Advisory Committee.

Working from the confluence with the Missouri River towards the west, the first geographic segment is defined as Missouri River to Powder River. This geographic segment includes some of the least populated regions of the entire United States. This segment is dominated by a broad, relatively slow-moving river that serves an expansive farming community whose interests blend with those folks living along the seventeen miles of the Yellowstone River that traverse North Dakota. Here the Yellowstone River is also important as a habitat for paddlefish and Pallid sturgeon. At the confluence with the Missouri River, the size of the channel, significant flow and substantial sediment carried by the Yellowstone River makes its importance obvious to even the most casual of observers. Prairie, Dawson and Richland Counties of Montana are included in this segment, as well as McKenzie County, North Dakota.

The second geographic segment, Powder River to Big Horn River, is delineated to include the inflows of the Big Horn and Tongue Rivers as major tributaries to the Yellowstone River and to include the characteristics of the warm-water fisheries. This segment is delineated to recognize the significant agricultural activities of the area and the historical significance of the high plains cowboy culture. This segment includes Treasure, Rosebud and Custer Counties.

The third geographic segment, Big Horn River to Laurel, essentially includes only Yellowstone County, but it is a complex area. To begin, important out-takes near Laurel divert water to irrigations projects further east. Additionally, it is the one county along the length of the river with a sizable urban population. Billings is known as a regional center for agriculture, business, healthcare and tourism. This area is notable for its loss of agricultural bottomlands to urban development. Irrigation projects are important east of Billings, especially in the communities of Shepherd, Huntley and Worden. These

communities and Laurel also serve as bedroom communities to Montana's largest city, Billings. It is in Yellowstone County that the river begins its transition to a warm-water fishery.

The fourth segment, Laurel to Springdale, ends at the northeastern edge of Park County, Montana. The river in this area is fast-moving and it supports coldwater fisheries. While there is little urban development in this segment, there are some rather obvious transformations occurring as agricultural lands near the river are being converted to home sites for retirees and vacationers. The geographic segment includes Sweet Grass, Stillwater, and Carbon Counties.

The last geographic segment is defined as Springdale to the boundary with Yellowstone National Park at Gardiner, Montana and is within the boundaries of Park County. The river leaves Yellowstone National Park and enters Montana at Gardiner. It flows in a northerly direction through Paradise Valley and is fast-moving. It supports a cold-water fishery that is well-known for its fly fishing potential. Near Livingston, Montana, the river turns easterly and broadens somewhat thus losing some of its energy. However, severe floods occurred in 1996 and 1997, and local groups have since spent many hours in public debates concerning river management.

Recruitment of Native Americans

Native Americans also have interests in the Yellowstone River. They are active in maintaining the cultural linkages between their histories and the local landscapes. For the purposes of this study a number of Native Americans from the Crow tribe and the Northern Cheyenne tribe were included. Native Americans were recruited by means of professional and personal contacts, either as referrals from state agency personnel, from Resource Advisory Committee members of the Yellowstone River Conservation District Council, or from other project participants.

Recruitment of Geographic Specific Interest Group Participants

The participants represent a volunteer sample of full-time residents of the towns and areas between the confluence of the Yellowstone and Missouri Rivers in North Dakota and the town of Gardiner, Montana at the north entrance to Yellowstone National Park. Participants were recruited from four major interest groups: agriculturalists, local civic leaders, recreationalists, and residentialists living near the river. A database of names, addresses and contact information was constructed for recruitment purposes. Nearly 800 entries were listed in the database, representing a relatively even contribution across the four major interest groups.

Individuals representing agriculture interests, including farmers and ranchers, were identified and recruited from referrals provided by the local Conservation Districts, the Yellowstone River Conservation District Council and the Montana Office of the Natural Resources Conservation Service.

Individuals holding civic leadership positions, including city mayors, city council members, county commissioners, flood plain managers, city/county planners, and public works managers, were identified and recruited through public records.

Individuals who use the Yellowstone River for recreational purposes, including hunters, fishers, boaters, floaters, campers, hikers, bird watchers, rock hunters, photographers, and others who use the river for relaxation and serenity, were identified and recruited from referrals provided by members of the Resource Advisory Committee. Participants were also identified and recruited by contacting various non-governmental organizations such as Ducks Unlimited, Trout Unlimited, the Audubon Society and by contacting local outfitting businesses.

The names of property owners holding 20 acres or less of land bordering the Yellowstone River, or within 500 feet of the bank, were obtained through a GIS search of public land ownership records. Twenty acres was used as a screening threshold to separate people who lived along the river corridor but whose incomes were from something other than agricultural practices (residentialists) from those who were predominantly farmers or ranchers (agriculturalists). The names were sorted by county and randomized.

Recruitment proceeded from the county lists. Other people living very near the river and whose primary incomes were not generated by agriculture were also recruited. These additional participants may not have had property that technically bordered the river and/or they may have owned more than 20 acres. In all cases, the recruits did not consider agricultural as their main source of income.

Participants were recruited by telephone and individual appointments were scheduled at times and meeting places convenient for them. Many interviews were conducted in the early morning hours and the late evening hours as a means of accommodating the participants' work schedules.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|--|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

A total of 313 people participated in the project, including 86 representatives from agriculture, 68 representatives in local civic roles, 76 representatives of recreational interests, 76 residentialists and seven Native Americans. A relatively equal representation was achieved in each geographic segment for each interest group.

Description of Interviews and Collection of Participant Comments

A master protocol was designed from questions provided by the US Army Corps of Engineers and approved by the Office of Management and Budget (OMB approval # 0710-0001; see example in the appendix to this volume). Questions were selected that would encourage participants to describe the local environs, their personal observations of changes in the river, their uses of the river and any concerns they may have had about the future of the river as a shared resource. Open-ended questions were used as a means of encouraging participants to speak conversationally.

The questions were adapted to the participants' interest groups. For instance, interviews with agriculturalists began with the question, "How many years have you been in operation here?" while local civic leaders were asked, "How many years have you lived in this community?" Similarly, agriculturalists were asked, "Are there any problems associated with having property this close to the river?" and local civic leaders were asked, "Are there any problems associated with having private or public properties close to the river?" The overriding objective of the approach was to engage the participants in conversations about the river, its importance and their specific concerns.

Participants were promised confidentiality, and open-ended questions were asked as a means of encouraging the residents to talk about the river, the local environs and their personal observations and concerns in their own words. All respondents were interested in talking about their perspectives, and they represented a variety of views of the river, including: farming, ranching, agricultural science, commercial development, recreation, civic infrastructure, environmental activism, historical views and entrepreneurial interests.

With only three exceptions, the interviews were audio-recorded and verbatim transcripts were produced as records of the interviews. In the other three cases, hand-written notes were taken and later typed into an electronic format. The total resulting interview data totaled approximately 2,700 pages of interview text.

Steps of Data Analysis

The content of the interview texts was distilled by way of analytical steps that would retain geographical and interest group integrity.

Segment-Specific Interest Group Analyses: Taking all audio-recordings, transcripts, and field notes as the complete data set, the research group first set out to determine the primary values and concerns for each geographic segment-specific interest group. The team began with the four interest groups from the segment Springdale to Laurel. Team

members read individual interview transcripts and determined a core set of values and concerns for the individuals represented. As a team, notes were compared and a combined outline of values and concerns was constructed for each interest group in the geographic segment. Quotes were then taken from each transcript in the set to illustrate the particular values and concerns.

Outlines of the interest group analyses for the Springdale to Laurel segment were then used as aids in constructing the interest group analyses in all other geographic segments. Care was taken to adapt the interest group analyses to highlight if, and when, the core values and concerns were different in each geographic segment. The Native American perspective was addressed as an individual analysis with attention to the specifics of those perspectives. Each of the 21 segment-specific interest group analyses was then illustrated with quotes from interviews.

21 Segment-Specific Interest Group Analyses

| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
|-------------------------------------|--|---|--|---|--|---------------------------|
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Segment-Specific Geographic Summaries: A summary of the values and concerns for each geographic segment was constructed using the sets of four geographic-specific interest group analyses. Geographic summaries were written to reflect the concerns that crossed all interests groups of the segment, either as points of agreement or disagreement, and were illustrated with quotes from the four relevant interest group analyses.

| 5 Segment-Specific Geographic Summaries | | | | | | |
|--|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

River-Length Interest Group Summaries: River-length interest group summaries were constructed for each of the four primary interest groups. For example, agricultural concerns from the five geographic segments were compared and quotes were taken from the segment-specific interest group reports to illustrate commonalities and differences. Similar reports were constructed for local civic leaders, recreationalists and residentialists.

| 4 River-Length Interest Group Summaries | | | | | | |
|--|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Organization of the Reports

Overall Summary of the Yellowstone River Cultural Inventory—2006: An overall summary of the inventory was written as a means of highlighting the values and concerns that cross interest groups and geographic segments. The segment-specific geographic summaries and the river-length interest group summaries were used as the bases for the overall summary. This report is by no means comprehensive. Rather, it is written to encourage further reading in the reports of each geographic segment and in the interest group reports.

Part I: Missouri River to Powder River: This volume includes the geographic summary for Missouri River to Powder River and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Part II: Powder River to Big Horn River: This volume includes the geographic summary for Powder River to Big Horn River and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Part III: Big Horn River to Laurel: This volume includes the geographic summary for Big Horn River to Laurel and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Part IV: Laurel to Springdale: This volume includes the geographic summary for Laurel to Springdale and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Part V: Springdale to Gardiner: This volume includes the geographic summary for Springdale to the boundary with Yellowstone National Park and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Research Team and Support Staff

The project was directed by Dr. Susan J. Gilbertz, Montana State University—Billings. She was aided in data collection and data analyses by Cristi Horton, Tarleton State University and Damon Hall, Texas A&M University. Support staff included: Amanda Skinner, Amber Gamsby, Beth Oswald, Nancy Heald, Beth Quiroz, Jolene Burdge, and John Weikel, all of Billings, Montana.

Powder River to Big Horn River: Geographical Segment Overview

Interviews in the geographic segment Powder River to Big Horn River were conducted June 18-23, 2006. A total of 63 interviews were conducted, including individuals with agricultural, civic, recreational, or residential interests as their primary concern.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|---|--|---|--|---|--|-------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Powder River to Big Horn River: Geographical Segment Summary

We have to make sure [future generations] have access and have the opportunity to enjoy the same things that previous generations have had with the river....It's going to get tougher because demand is in its infancy. As the pressure gets more...there will be more issues. Right now, it's in the beginning stage. (Rosebud County Local Civic Leader)

Introduction

In the study segment, Powder River to Big Horn River, three conversations emerged across the four interest groups. The first conversation focuses on the “familiar way of life.” The conversation exposes a local identity that is tied to agriculture and to traditional forms of recreation, such as hunting and fishing. When asked if the familiar management practices are sufficient in terms of sharing the river’s resources, some locals express concerns. The second conversation explicitly acknowledges that the demand for recreational access to the river’s resources is in its infancy in terms of representing a problem. The third conversation focuses on controlling the river with rip-rap and dikes.

A Familiar Way of Life

The people of the segment Powder River to Big Horn River reveal an identity that directs their way of life. This identity draws a distinction between Western Montana and Eastern Montana and is especially concerned with agricultural activities as the economic base of these communities and with ease of access to the river’s recreational resources. Locals often explain the unique social and geographical features of the area:

We originally came to Eastern Montana to get experience and then move west, but it kind of grew on us after a while. *(Rosebud County Residentialist)*

[It's] less populated, thank God....I like it here. Open, Big Sky country—that's us. I don't know how the western part of the state can claim that. [There are] too many mountains and trees. *(Rosebud County Residentialist)*

It is very scenic. We take it for granted. You come out here and see the badlands....I get so many comments on this picture about the scenery in the background. We don't think about it too much. It is probably one of the nicest places here. We are close to the Interstate. *(Prairie County Agriculturalist)*

Some people find this area to be very desolate,...[but] it has the beauty of the river and the beauty of the drylands. It's very much a prairie/plains environment.

The wind always blows, so you [had] better be ready for that. (*Rosebud County Local Civic Leader*)

It's scenic in its own way. We're kind of in the intermediate stage of the river. It's not a free-style mountain river, but it's not [like] Glendive where it looks like a channel. It's kind of in the middle. It has a lot of character. It's pretty diverse. (*Rosebud County Recreationalist*)

Agriculture is identified as an economical and social contributor to this segment. Also, the agricultural community is seen as a primary provider in terms of access to recreational resources associated with the river:

It is like having an artery in your body. It is a vital part of this valley. It is the lifeblood of the valley. Our irrigation district was co-founded by our granddad. (*Treasure County Agriculturalist*)

The agricultural sector of the economy in Custer County contributes anywhere from nine to 13 million dollars per year. Much of that is generated in the Tongue River Valley. There is a great deal of irrigation that is derived strictly out of the Tongue....It is very important for this economy that the quality of the water in the Tongue River and downstream is acceptable to the kinds of crops that have traditionally been grown. If we lose the water quality, we lose a significant contribution economically to this community. The Powder is the same. These are stretches of water that just in normal runoff, that runoff is piling sodium load into the river. If we have additional sodium in the reservoir, we end up with a precarious situation for irrigation. (*Custer County Local Civic Leader*)

They go hand in hand....I say it's 50-50. I do. Agriculture needs it as much as we need it. It's not a position of 'them' versus 'us.' My interest is recreational, but I also want agriculture to do well because them doing well allows me to recreate....We just don't want any battle. It would be so unnecessary. It's worked before; we can work together. It's good for everybody. (*Treasure County Recreationalist*)

Recreational uses are often connected to the agricultural backdrop and are considered economically important and central to the social ties that bind community members together:

From our standpoint as commissioners, the [river provides] economic benefits for the local area....[It] provides irrigation for the farmers....It brings...the hunting and fishing people...[and it serves] our own recreational uses. (*Rosebud County Local Civic Leader*)

We're right at the balance, I think now, between recreation and agriculture. If we switched from one side to another, we would alienate the landowner. That would hurt the access....Then we lose generations of future hunters and we lose those

dollars into the economy, whether they go buy iPods, cars, or motorcycles, instead of buying fishing poles, and goose decoys, or something. I don't know. People will spend money. (*Treasure County Recreationalist*)

Rivers are made for such things. People swim in it, [and] people float in it with inner tubes or rafts. A lot of kids in the summer will put in at Meyer's Bridge, which is on the other side of Hysham, and float down and somebody will take them out in Forsyth. That's a great float....Anytime in the summer, you can see adults and kids doing that....People fish on it. People hunt on it during hunting season, particularly [for] geese but certainly ducks. People will walk its banks just to walk the banks of the river. People will walk its banks to collect rocks because the rocks in this river are truly phenomenal....The famous Yellowstone agates, which, at the turn-of-the-century were considered semi-precious gemstones, were sent to New York, London, Paris and Rome to be cut into jewelry. There are two old-time collectors here whose backyards and outbuildings have nothing but these piles of agates that they have collected....The river gets a lot of use....My wife and I spend a lot of time on the river...Seldom are we alone, and we don't go to the easy access places. (*Rosebud County Local Civic Leader*)

Both agriculture and recreation create a way of life that offers a sense of identity and a sense of place to the people of this segment:

This isn't a Cabela's fantasy....[We've] been making this three-day trip, annually, for 33 years....We build our own homemade canvas-covered boats....[and when] we poked a hole in one, we pulled over and all got to chewing gum and patched it on both sides. (*Custer County Recreationalist*)

If I sold this ranch, I would lose my identity, I guess. And I would lose my character. That's what would probably happen to me. I would maybe sell this. But I don't think the town of Terry needs another town drunk. That's probably all I would be. When your family has been here for that long of a time period, you just create some sort of identity from the land...My life is based more on the history of the land and a lot of people don't have that. (*Prairie County Agriculturalist*)

It's the quiet and the peacefulness of being down in that area along with the water. It's kind of a place that you can go,...relax and do the things I like to do. (*Treasure County Recreationalist*)

It's a seasonal elixir for my obsessive compulsive disorder. I have two things that I might consider to be OCD: one is pheasant hunting and the other is river rafting. (*Treasure County Recreationalist*)

It was a great place to raise a family. I would still live here if I wasn't farming or working. We are close to anywhere we need....I can't imagine living in a city. (*Treasure County Residentialist*)

I'm a fourth generation Montanan. My great grandparents homesteaded here....Being raised here, I just love it. I go other places, and it just doesn't feel quite right. (*Rosebud County Residentialist*)

Yet, some of the members of these communities recognize that familiar ways of doing things near the river may need to be questioned. Among the topics of concern are questions regarding the forms and functions of regulatory entities. While such questions are not necessarily pervasive, they are found within each interest group, including agriculturalists:

I know how much fertilizer, and I know how much herbicide, and I know how much insecticide is put on the sugar beets....You fertilize your field, and then you flood irrigate it....It doesn't disappear, it ends back up in the drainage, and it all ends up back in the river....There's no question about it. [For] most of the rivers in this country, the nitrogen rates are far higher than they should be. (*Rosebud County Local Civic Leader*)

There are probably issues out there that are waiting to come up, [that] would be my guess. From a planning board perspective, they rarely come up [here] because so much of the river is Ag. (*Custer County Local Civic Leader*)

Recreation...doesn't use up water....I mean, you're using the water for play but you're not using it up....The growth in the community certainly could use more water, and I worry about agriculture, because I know...people are tending to take a lot more water than they have water rights to. It's a concern....Number one, enforce the water rights that the farmers and ranchers are using....[I know] that's their livelihood, so I'd hate to see that taken away, [yet] we have to have water to drink. (*Custer County Residentialist*)

Ag impacts, or at least...[is] being blamed for, mortality on certain game fish species, such as sauger...down near Sidney at Intake Dam. [The dam] is blamed for killing hundreds of thousands of fish every year. (*Custer County Recreationalist*)

When you start talking about modifying irrigation structures for recreational uses, you have a direct tie to money and the irrigation guys are going to go nuts. You are benefiting someone that [irrigators] don't care about, and that [irrigators] don't think have any reason to be there. I think that's one of the fights. (*Treasure County Recreationalist*)

They're still so afraid of having government involvement....And, I hate to say this, but a lot of those guys, they're in farm programs, and as long as they can take money out of the farm programs, well, then the programs are all right. But then, boy, there better not be any kind of strings attached....I can sit out and bark because, for three generations, we've not taken government handouts, or government programs, or government aid of any sort. And, until you get

yourself...there, and then stand back and view it, these guys don't have a lot of room to complain about government involvement....I think we can...put [ourselves] in a position that we can protect that river as a resource and it can be there for generations to come....[In terms of accepting regulations] sometimes, along the way, there's some bitter pills that has to be swallowed. (*Prairie County Agriculturalist*)

For the people of the Big Horn River to the Powder River, the local way of life is built around a somewhat desolate but scenic place to live. Most people from this area agree that agricultural and traditional recreational activities contribute to the character of their communities; however, discussions regarding regulations expose complex ideas concerning how to best share and protect the resources of the river. Further complexities are shown in the next section.

Recreational Demand is in its Infancy as a Problem

Nearly without exception, discussions in the Powder River to Big Horn River segment noted that recreational demand is in its infancy in terms of representing a problem. Of particular concern is the need for access to the river and to its recreational access, such as wildlife for hunting. As more and more outsiders discover the local resources, residents of the area are aware that the familiar ways of sharing are not necessarily followed by everyone. The conversations reflect a desire to both embrace the familiar ways of sharing resources and to plan for the eventualities of increasing recreational demands. To begin, most see that recreational demands are growing:

With more population in Billings, we're seeing more people coming down this way to use the river. (*Treasure County Recreationalist*)

Last year it was nice, but we saw more people than we have ever seen. (*Custer County Recreationalist*)

We have been doing it a long time and the traffic anymore....They have big, fancy boats, jet boats....There was one that came by us last year that was as big as a school bus. I thought we were going to sink. It is not rustic anymore. They...[aren't] hunting. (*Custer County Recreationalist*)

Local land values are increasing as agricultural lands are being purchased for recreational uses. This shift causes locals concern as they recognize that such increases may not be appropriate for local agriculturalists, especially as these changes raise taxes:

But, [putting land into production] does not increase the value anymore. It's recreation....For instance, up here there used to be three big sprinkler systems—three big pivots—, and they...[were] put in there for production of the land, production of crops, [to] feed more cattle....I sold them...and I just irrigate, I just flood irrigate. I could put a sprinkler up there and I could raise a lot of crops. But, where I live here, if I want to sell it, I would have a high value just for recreation

or the opportunity to increase production. What I'm trying to say is, I could go out here and I could buy a big sprinkler that costs, say, \$150,000 to irrigate 200 acres, or I could not put it in there, and it's still worth the same amount of money, because some people would buy it for the potential for production versus if it was in production. (*Prairie County Agriculturalist*)

I did get my point across to you, which I think is very important, that...you have to base things on the value of the property, based on what it would sell for, based on its production. Well,...[now] that production is recreation....People are buying things more for the investment value than production value. (*Prairie County Agriculturalist*)

We'll continue to see more outside ownership. The folks here that want to be in agriculture need to develop long-term leases with the [new] owners....Land sells at higher prices than it will produce in cash flow. So, if you've got to pay for it with the [farm] income, that doesn't work anymore....Folks that come from out of the area, whether it's Billings, or back east, or other states,...[some are] part-time, or they're moving here and retiring....[Maybe] they first came here hunting and [then became] interested in owning some land to hunt on because it's getting harder and harder to find places to hunt. Or [they] just believe it to be a good investment....When the stock markets went lower, and they weren't doing very well with their money, there was a common thought to put it in land. [Land] will always be there. (*Rosebud County Residentialist*)

In this day and age, you don't really base things on production like you used to. You base it more on the assessed value and what it would be if you sold it. That's the way that land along the river is....It's getting less production and more 'what's for sale,'....Now, if a person went to sell this ranch, it would sell more for recreation value than production value...it used to be ten, 15 years ago, and you'd see the productions of the crops would be the value of it. But now when a person comes, like when that real estate agent comes and we looked at it, he put a value of \$700 on it based on how many whitetail deer ran out of the trees and how many 'coons there were. (*Prairie County Agriculturalist*)

I think if they are buying it as recreation property, it should be taxed that way. Maybe if you tax [it] that way, and you tax mine that way and I am trying to raise three dollar wheat, it is not going to work. Those people don't contribute to the community....Make them guys live here and when it gets to be 40 [degrees] below [and] maybe they will leave. Everybody wants a piece of Montana. I don't know what the answer is. It is part of a free system where, if you have money, you buy something. You have the right to buy it. You can't compete if you want to buy more Ag land. (*Treasure County Agriculturalist*)

Local people note that hunting access is less easily available. Outfitters, guides, new landowners, and seasonal recreationalists are negatively impacting local access availability:

I've heard other people saying it is more difficult. I mean, [with the] guides getting in there, tying up areas, paying off the ranchers to keep everybody else out. I think if I lost the ranchers and farmers I know, it would be tougher to get on. (*Rosebud County Recreationalist*)

Now most private land is being guided. In my opinion, 70 to 80 percent is. What isn't being guided is being bought up by hunters. The hunting and fishing is a commercial venture....When you get to Bozeman [and] Missoula, if you want to do anything, you fork over 300 bucks. Get a hold of a guide to go fishing. (*Rosebud County Agriculturalist*)

New landowners are not willing to share:

[We're seeing] primarily out-of-state, big money coming in to buy their little piece of Montana and they don't want to share it with anybody. (*Custer County Recreationalist*)

[Access]...is getting harder all the time. That has changed. It used to be you could go anywhere pretty much. Now places are getting bought up for the purposes of their own hunting. It is getting tough to find somewhere you can hunt. (*Custer County Recreationalist*)

Disrespectful seasonal recreationalists cause hardships for responsible recreationalists and the landowners:

[Just] like everybody, out of 100 hunters, one of them is going to do something stupid, and that's the one they remember and makes a bad name for everybody else...It's up to the rest of us to police them and to keep them in line, which we do pretty well, but people are people. Not everybody has the same value system that we do. They just don't care; they're here for months in their life and they're gone. They don't have to live with the repercussions. (*Rosebud County Recreationalist*)

Everybody comes to hunt on the weekend. I had a guy stop and I told him that I had too many hunters already on and he could come back during the week. He was madder than hell. Last year, we said, 'To hell with it!' and closed it and leased it out to five individuals. You hate to do that. These guys formed a hunting club and leased it and they hunt it. Everybody else is out. That is too bad, but they forced me to do it. I had hunters that would come on drunk. Some would come on without asking. (*Treasure County Agriculturalist*)

Access—that is complicated....I would like to see just two accesses but...it would be better for the public to have one more....There have been times, especially during deer season, [when] they keep hounding me... to put a boat in. So far, I haven't let anybody use it except my own family. There can be hard feelings over it. It is private property so they should understand that....I am not real comfortable with [them going] right by my house....You are going to have people throwing stuff out and littering. You think they won't, but they will. (*Treasure County Residentialist*)

As landowners charge and/or increase access fees, many locals feel the expenses are limiting access to the wealthy:

We're getting people from out-of-state. People with a lot of land...that are financially well-off. People that guide hunters and things like that....I've seen the amount of hunters increase quite a bit, and I'm not saying that's bad or anything. It's good for the economy, [and] animals are overpopulated. It's good for the herds, too....[But,] in the old days, you used to be able to just go hunting and now it's going to cost. (*Rosebud County Residentialist*)

We're seeing that jealousy. The rich people can go hunt on all this prime land, but the guy that lives here and drives the school bus can't get in on the property because he doesn't want to pay to do it. (*Treasure County Recreationalist*)

However, most conversations reveal that Block Management provides affordable access while generating local revenue and game population benefits:

Fish and Game controls [Block Management], and the landowner gets paid so much per person, per day. And it's trying to keep more of the acres open for the average Joe that can't afford to lay out a few thousand bucks to tie a chunk up so nobody can hunt on it for years. (*Treasure County Residentialist*)

We have more waterfowl. We have goose hunters from as far as North Carolina. We are in Block Management. We get ten dollars per hunter. It was temporary, but now I think it is permanent. It is strictly voluntary. It has brought a lot of revenue to this neighborhood. Most around here is from \$3000 to \$5000. (*Prairie County Agriculturalist*)

Block Management is a wonderful program. It benefits, obviously, the hunter; it benefits the landowner, and it also benefits the game, too, because it disperses them. It's not all crowded into closed-off areas. (*Treasure County Recreationalist*)

I'm somewhat of a believer in letting the public use your land as long as they're responsible....For instance,...Block Management,...[has] been working real[ly] well for us. And hunters just appreciate it, because, you know, they're having such a tough time getting onto private property to hunt and stuff. As a landowner, I don't mind them hunting, and they appreciated it. As long as they take care of

the property, I think it's beneficial to us. And, the fact is, they keep our deer population and stuff in sync. So, that's a good program. And...I still have control, because I can tell somebody, 'No, I don't want you on [our place].' We keep a bad list. (*Treasure County Agriculturalist*)

Although there are a few drawbacks, many feel Block Management will gain in popularity:

The phone starts ringing in mid-August. A lot check and see what it is [Block Management]. We ask them to call in advance. We have room for several, but when it is full, I restrict it. Come mid-January, we are glad it is over. Some of the people are the greatest guys in the world. Great people. (*Treasure County Agriculturalist*)

It only takes one person to turn you off. It doesn't take much to say, 'Why am I doing this?...What is ten dollars per hunter?' To me, it is birdseed for your trouble,...[and] when the money for Block Management ran out,...[landowners] didn't get paid. That isn't right. If they don't have the funding, they need to let them know. (*Treasure County Agriculturalist*)

I think if there is ever somebody reported for doing something like that they should be banned for five years. We do Block Management and I had one guy that came down a couple of times. He was rude and obnoxious and a total jerk. He called one time and was rude to my daughter. When I got home that night, I called him at 11:00. The Block Management people called me the next day and I told them what this guy's name was and they put him on the list so he won't draw any special permits for five years. As far as bad hunters go, if there is a way to catch them, they shouldn't be allowed to hunt. (*Treasure County Agriculturalist*)

I suspect that access will be harder in the next decade, as far as hunting, as far as getting permission to go, whether to go out pheasant hunting, coyote hunting, [or] deer hunting. I envision Block Management to be even a bigger thing out there. I think that is a good program. I would pay more in license fees in order to make sure that big ranches don't close off huge sections of land to the average guy. I am a big supporter of that. [Now it seems like] five or six sections are closed up by someone who has leased it to an outfitter. (*Treasure County Recreationalist*)

As the recreational demands increase, many express a desire to maintain a balance between agriculture and recreation:

Balance...keeping that relationship that allows agriculture to do well, allows opportunities for recreation and fishing....I just think the balance is important. (*Rosebud County Residentialist*)

The Yellowstone is in much better shape than the Tongue as far as appropriations, but it concerns me, as we move through time, that more emphasis is placed on

wildlife at the expense of irrigation. We haven't seen huge issues yet, but they may come. And, [as for] municipalities,...the water is going to go where the votes are, ultimately, and that can be a concern. (*Custer County Local Civic Leader*)

I think more value needs to be put on the recreation values of the river and less on the irrigation uses. Historically, irrigation was the king, [and] whatever they wanted to do, they could do. And we still see that right now. You can't really deny guys who want to put head gates in...for irrigation purposes. (*Treasure County Recreationalist*)

Recreation is important. But it has nothing whatever in value compared to the high yield land and the farm possibilities on that river. And then the power generation, too; that comes from the river. (*Custer County Agriculturalist*)

This particular diversion dam serves 20 miles of agriculture and agriculture producers. That's important to the economy and their livelihood....I don't like hearing the talk about let's knock all the dams out of the river and let things free-flow naturally because that's best for the ecosystem....I think those [dams] serve a great purpose: this one out here for agriculture, the one up there for recreation and agriculture, and to control flooding....I think there...[are] ways to open up around diversion dams so that the ecosystem can stay in balance if that's necessary....I don't want to see agriculture get traded out for the big money, open space, open recreation. (*Rosebud County Residentialist*)

The struggle for general economic viability of these communities adds to the complexity of the situation. In Treasure and Rosebud Counties new businesses are especially needed to draw people to these communities and to encourage youth to remain or return:

As a city council member [in Forsyth], one of my concerns is to encourage different businesses that would hold [jobs for] our kids, where they could go to [college] and come back and have something to work for. Right now, there's nothing. (*Rosebud County Local Civic Leader*)

People are...[growing] older [and there are] more retirees. I think this would be a fair statement. We've already seen [this happen in] the community of Hysham. (*Treasure County Local Civic Leader*)

The school is in bad shape....When I was going to school there were 70 or 80 [students] in high school, [and it] got up to 100. And now we're at 30...[or so]. (*Treasure County Local Civic Leader*)

Will there be enough jobs that we can keep some of [the kids] home? Or do they have to go farther? We see fewer and fewer opportunities in these small communities. So, there's a migration toward Billings or larger communities. I'm not sure if we can reverse that....[We're] making sure they get a good education

and...from there [they] go where they can. I hope they have the opportunity to enjoy some of the rural areas in the longer run. (*Rosebud County Residentialist*)

Many of the participants from Custer County regarded energy-related industries as potential new neighbors that would add to the economic base of the community:

I see it growing because of the energy in the area. There are companies coming in that deal with energy. If it grows, it's going to be because of energy. It's basically right now an agriculture town and hasn't grown a lot at all....There's always the possibility of the Tongue River railroad. They talk about power plants....Energy is becoming more and more important....At some point, it's going to come in and we're going to see the town grow. (*Custer County Residentialist*)

Most discussions support embracing and protecting the familiar way of life while embracing and planning for potential opportunities:

[We need a] collaborative plan that ensures varied use for all users, whether it be Ag,...[recreationalists] , or homeowners, just so there was adequate planning to address all of the needs fairly for all....It's going to be a shotgun thing....The legislature will be sticking their nose in, the Soil Conservation Boards are already in,...the Fish and Game will be up against issues, and so will the local planning boards. So, it will be a multi-faceted thing. [I don't know] how a person can keep it all organized and not have every entity doing their own thing....That's the way it is, right now. We have never had a collaborative meeting of any kind, with Fish and Game, with Soil Conservation, [or with] county planners. When an issue comes up, we do our part, [and] they do their part. (*Rosebud County Local Civic Leader*)

As commissioners, you are trying to promote survival of the community, which is economic development and expanding the community. That means jobs....Yes, we want the power plant and those 150 new jobs that pay well. How does that impact the farmers, the users of the resource? How does that impact the recreation? Sit down and give it serious consideration. We don't want to say, 'No, we don't want you here.' But we have to work to minimize the negative impact. As we grow the community, we are impacting that resource for recreational purposes in conflict with the Ag users. (*Custer County Local Civic Leader*)

We have to make sure [future generations] have access and have the opportunity to enjoy the same things that previous generations have had with the river....It's going to get tougher because demand is in its infancy. As the pressure [rises],...there will be more issues. Right now, it's in the beginning stage. (*Rosebud County Local Civic Leader*)

Even though immediate and sweeping changes are not apparent, some discuss the need to plan now:

Nobody is going to do anything because, right now, there is not that pressure....You add up everybody in three counties here, and you don't come close to the population of Ravalli County....Most people, when they think they want to move to Montana, they look at the ads in magazines or on television. You're not looking at Forsyth or Miles City or Jordan....You see the Flathead Valley, you see the Bitterroots,...[and] you see the Bob Marshall Wilderness. That's what you see...and that's where the pressure is. (*Rosebud County Local Civic Leader*)

So few locals want to be involved....They look high and low to get people [involved. But, many people will complain.]....If it's so much in your heart, hop on board...and you will have input. The things I go to [regarding the river]...there is room on there for input. I mean, people just are too complacent. [They ask,] 'How in the hell could you ever do anything to change the scope of the Yellowstone?' Well, you can destroy that river....People...just don't think that it's ever going to happen. (*Prairie County Agriculturalist*)

These kind of comprehensive planning things, where the river uses are taken to the public to ask the kinds of questions you're asking: What should be going on here? What do you want to happen? The difficulty in doing that is getting people interested and actually voicing opinions, like any other planning. People don't care until their ox becomes gored and then they care a lot. (*Treasure County Recreationalist*)

An obvious challenge is exposed when discussing regulations:

If we don't have regulations we're going to have development right next to the river. I think development is the worse of the two evils, so we wind up accepting the regulation....[Otherwise] we can lose the cultural resource....[through] an incremental downhill slide. It's unfortunate, but this is America, [and] that's how it works. (*Custer County Local Civic Leader*)

The planning board could adopt some zoning regulations that would describe which land-use possibilities would be along the Yellowstone, and it's probably something that's going to need to be looked at before long. Right now, we're kind of in the mode of not a lot of zoning because we don't want to put a lot of restrictions on the property....We're thinking about how we want to proceed, but we haven't done anything because we want to make it so it's not restrictive. (*Rosebud County Local Civic Leader*)

Conversations across all interest groups reveal a desire to see the issues addressed locally. Attention is paid to the notion that a one-size-fits-all answer will not work, but a desire

for collaboration with others is expressed. Virtually all groups understand local control will work best if it is guided by helpful information from others:

Anytime you get something that...[needs to be regulated], it should be done by the people that are affected. (*Custer County Recreationalist*)

I don't think we need government or anybody to regulate us....[If we must have regulation,] I would go more for state, or even county. I think the closer you get to the people at the local level, the better. (*Custer County Agriculturalist*)

You look at the flood issues in other states, and...[how they allow]development right up to the water['s] edge, is there something to be learned? Should we protect the riparian area? Should we be considering a setback as a tool?...The Red River Valley in North Dakota floods frequently and they go right back in and build again.... I hate having...[control], but you have to. If each county is different, how is that managing the overall river? I see a broader scope of application, either through the council [the Yellowstone River Conservation District Council] or state law, that would allow us [control and still] not get backed into the one-size-fits-all type of regulations. (*Custer County Local Civic Leader*)

[A setback requirement] is probably something that a county can do, but, on...a river like the Yellowstone, it would almost have to be multi-county in order to be effective. I think it's the Big Hole River in Western Montana where three counties went together and established a...[500-foot] setback for roads and power lines....The three counties got together and said, 'Let's do this.' So, for the lower Yellowstone, if it was multi-county, it would be far more effective. (*Custer County Local Civic Leader*)

I really think that, as they develop housing,...decisions would have to be local. Decisions would have to be local, but it's going to be tough for a community—for Treasure County or Prairie County—to come to some sort of a regulation. I can see the Council coming up with a template, 'Here is a riparian management scheme regarding development'....Then the county can take it...[and] rebuild it to what their needs are....In Prairie County, they may have concerns about putting feedlots down in a flood plain....That may not be a problem in Sweet Grass County [where] they're worried about houses....[We need some] kind of a template on developing things that will impact that zone. (*Custer County Recreationalist*)

People in the Big Horn River to the Powder River segment recognize that the familiar way of life may not suffice in the future. Conversations capture the frustrations associated with limited hunting access and with maintaining a balance between the familiar ways, local control, and adequate management in the face of complex change.

Controlling the Yellowstone River

Discussions regarding flood control and erosion control focus on dikes and rip-rap as respective remedies. Both remedies are regarded as effective and expensive. Frequently though, conversations regarding erosion lead to varying opinions:

What do I do about the erosion? Stand back away from the bank. (*Custer County Agriculturalist*)

I have places along the river where I see [erosion], but, to me, it is a characteristic of the river and I realize it's a natural thing. So...it's not a problem for me because I think it's a natural thing....I see the river going up. I see the river coming down. I see the ice jams. I see all that stuff....I've lived along here for a long time and you're not going to do...[anything] to stop it. The more you do to stop it, the more it's going to erode. (*Prairie County Agriculturalist*)

A lot of the erosion is natural and just ebb and flow. (*Custer County Recreationalist*)

I think it is a natural process of that river system. Islands [are] made, [and] islands disappear. I just think, [in] really high water, erosion is a natural process along that river. (*Rosebud County Recreationalist*)

For some, rip-rap will control the Yellowstone River if it is properly applied:

In my opinion, most of all the rip-rap projects...have been done wrong. It's because people have not taken the time to assess, 'What am I doing? What do I want this to look like? and What are the true reasons [why] I am doing this?' You know, if you analyze all those things before you go in there...hopefully you'd come to the realization that you'd give the river some room. So that when it comes its day in June that it needs to go over the banks....It has...[somewhere] to go. You could stack the dirt up 40 feet high and just keep narrowing it up. Well, the river is going to rev up so fast that Jesus Christ himself couldn't stand on the bank and keep the bank from disappearing....I mean, we just got to pay attention. (*Prairie County Agriculturalist*)

You need to rip-rap the corners of the river, but leave the straight-aways alone. The river can meander and it has....It has probably been all over this valley. (*Treasure County Agriculturalist*)

Nearly without exception, participants' conversations recognize rip-rapping as a controversial practice that is expensive and laden with governmental red-tape:

Rip-rapping is highly controversial because agriculture is such a big part of Montana. If a rancher loses a huge hay field, that's irreplaceable to him; he's out of business. If he's out of business, then Montana doesn't get that. The

Yellowstone River is a free-flowing stream that brings huge amounts of recreational dollars to Montana. Fly fishermen come from all over the world to fish this river. So, what is right, what is wrong? I think that the rip-rapping should only be in areas that would protect the spring creeks and the rest should not exist, unless it is a highway or a bridge, or something that we need to protect them for public safety and access.... You see, [there are]...tons and tons of rocks dumped in there, forcing the river off to another direction. And some rip-rapping will force the river [to be] somebody else's problem. They have to, in turn, address that problem.... We don't want a Yellowstone River that is all channelized all the way down to Miles City. I mean, we just don't do that. (*Treasure County Recreationalist*)

We are so gung-ho on making sure we don't have soil erosion. We have to leave stubble on the field; we have to have a certain slope to the fields to prevent erosion. The biggest monster for soil erosion is the river. The reason they don't touch it is...[the]environmentalists and it is so costly. It takes a lot of money to rip-rap a river. We poop that away every day in Iraq.... We don't take care of our own country and our own people, just like this river. (*Treasure County Agriculturalist*)

The answer of the moment is rip-rap, and if you can get the Conservation District, the DEQ, and the Corps of Engineers to agree with you, you have some chance of applying rip-rap. Of course, we apply rip-rap entirely different than we used to. It's not chunks of rock or concrete dumped in there; we'll net it, and vegetate it, and fertilize it. If you can establish the river willows in it, you have a much better chance of saving something. It's not cheap, and everybody can't do that. (*Rosebud County Local Civic Leader*)

Well, it can stabilize the bank, but you're changing the hydraulics of the stream, so you're going to get a change somewhere else. You're going to deflect it somewhere else or change the deflection somewhere else...and it's going to be hitting the bank differently someplace else. (*Custer County Recreationalist*)

If you stabilize it on one side, the water has to go somewhere. Maybe it is best to leave it alone. (*Treasure County Agriculturalist*)

The effectiveness of dikes was frequently discussed by the participants of the Big Horn River to the Powder River segment. Most people feel the dikes will probably prevent or minimize flooding:

No, they don't [have flooding] because of the dike that's built along there. That took us out of the 100-year flood plain. (*Rosebud County Residentialist*)

We haven't had any [flooding]. This house was built later than most of the houses in the neighborhood, up on the ground, so a flood would still do damage here, maybe the basement.... It would have to be a bad flood to damage this

house....[It] doesn't really concern us now. There would be plenty of warning for it now....[You] insure your house and leave when they tell you it's going to flood....It's not something I am going to worry about living down here. It's the chance you take. (*Custer County Residentialist*)

[We've had]...ankle-deep water, but it didn't get in the house. We've got a slough that runs parallel to the Yellowstone River down in there, and when it floods that fills up first. You might get three to four feet of water in that, but that's a low area, it's like an old riverbed. But out on the streets and stuff, you might be walking in water ankle deep. (*Custer County Residentialist*)

However, some question the overall security provided by local dikes and not everyone has a dike to protect them from flooding:

I have an idea: if we ever have a real wet winter, all...[of a] sudden we will find the weaknesses in [the levee]...[that] will become an issue. But we haven't had enough runoff or water to say it's been a problem. There was a period of three or four years when there was quite a bit of ice buildup and ice jams....My husband was working out at the packing plant at the time and one night he really got scared. He heard the ice breaking up and there was ice coming on shore....If there is one of those winters where there is a deep snow pack and then we have a lot of snow—the two combined—then it could be interesting. (*Custer County Local Civic Leader*)

We're actually two blocks this way from the river....We hope [the dike] will hold....That's always a concern. Our house is out of the flood plain; it's built up high....But, with the drought we've had in the last ten, 20, 30 years, it's not a real big concern. (*Custer County Residentialist*)

Forsyth is quite secure. The dike is in good shape, and we intend on keeping it in good shape. The community of Rosebud needs help. We are planning to do some mitigation....The ice jams cause flooding. We have an area of the river...[that's] down by Rosebud and makes a sharp turn, and the ice packs up there. It always does. I can guarantee it. We have done some mitigation down in Rosebud....We built up the Dike Road by two feet so it isn't quite as bad. But the town of Rosebud is not a good place to live [during] high water. (*Rosebud County Local Civic Leader*)

The dike is kind of a funny thing because if you look at the east end of it, it makes a big curve and it just stops. If there...[were] an ice jam in the right place, it would just run through here. (*Rosebud County Local Civic Leader*)

Dike maintenance and the costs of insurance are on-going concerns:

We see maintenance on [the dike] every few years. If there's ever a spot that isn't very strong, you see them dumping gravel over the bank....So it seems to be maintained very well. (*Rosebud County Residentialist*)

[Forsyth] is built around the river, and the city is protected by a dike. [The decision to build it was] influenced by what the old-timers will call the Great Flood of 1918, so it's nice to have the dike. We have a working relationship with the Corps of Engineers to maintain the city's responsibility for the dike. (*Rosebud County Local Civic Leader*)

Maintaining the dike area [for its] aesthetic value [is important]. Who wants to have a wall of concrete along the river? Then it's not a river, anymore. It's...been turned into a canal. (*Rosebud County Local Civic Leader*)

[The] Corps of Engineers require us to keep the dike from being invaded by trees and shrubs so that its integrity isn't ruined....They also want the dike clear [so that if] they have to get up on the dike...to work on it, they have a clear runway. Some people in town, regardless of their deed, rightly or wrongly, incorporate the dike right into their yard....[as] a little rock garden. Most people understand it's a dike, and they're not digging holes in the dike [to] make a water feature out of it....So, we have very little trouble with that. We only have one [continuing] incident where somebody tries to fence it off. Most of the time, we don't have any problem with that at all. (*Rosebud County Local Civic Leader*)

The only change I would like to see in the river is a little better dike system. I don't want to give up the trees....If they had to take out the trees to make the dike better, then I would like to see them replanted....The erosion is moderate....I saw them putting some rip-rap up there this spring....Everybody complained about how it was done...[and that] they tore out the trees....Why can't you leave trees too? It can't hurt, and it's better than big chunks of cement. I didn't understand that. [The trees] were mostly dead, but still their root structure was still [there]....Don't take the root-balls out....Then, the way they built it back up, it's soft...[and] over time it will settle....[But] with all the trees gone now, when water comes up, soft ground doesn't take it too well. (*Custer County Residentialist*)

The other issue that is of primary interest is the dike. Most of the north side of Miles City is in the 100-year flood zone. Everybody there is paying flood insurance. They would rather not. This is a town where the average income is a few hundred dollars over the federal poverty level. The dike, according to the Army Corps of Engineers, is not up to spec [engineering specifications] in terms of materials, and there is no way to replace that existing dike where it stands. So, the long-term plan is to back up the existing dike with a new dike. There needs to be a buffer zone of 100 yards, then build a more secure dike, up to spec in terms

of materials, and either leave the older dike in place or tear it out....It is a massive project, budget-wise, for this community, and it happens when we have an infrastructure which has been aging and neglected for decades. We are fixing some of those critical infrastructure problems, primarily water lines and sewer lines. Those have to be our first priority, right now,...[but] for the people on the north side of the town, we have to get the dike squared away. The Tongue side is secure. The Yellowstone is the one that needs work. (*Custer County Local Civic Leader*)

I know there's people here in this town that will dispute the levee being safe because they want the federal government to come in and redo it completely....They've done surveys and different things....It is my impression that they would basically redesign the levee, make it wider and stronger. If they ever did, I was told that they would buy [land near the levee], which would be nice for me....I don't think that will ever come to be...but my thought was, 'Great, I get to sell some property to the government, somebody that's got money.' (*Custer County Residentialist*)

I believe the dike is stable. I haven't heard a lot of negative on it....It does cause a lot of people to pay high insurance. There is a moratorium, or restrictions, on building in some areas. A pretty big chunk of town is affected by that—everything north of the railroad tracks. (*Custer County Local Civic Leader*)

A number of other discussions can be found within and across the interest group analyses (see individual reports). For instance, water quality and water quantity are common concerns, as well as noxious weeds. This summary addressed only the three dominant local conversations. It is hoped that readers will delve further into the concerns expressed by members of each interest group by reading the attached inventories of quotes.

Powder River to Big Horn River: Agricultural Interest Group Overview

Twenty-two interviews were conducted with individuals representing agricultural interests, including farmers and ranchers. Participants were recruited from referrals provided by the local Conservation Districts, the Yellowstone River Conservation District Council and the Montana Office of Natural Resources Conservation Service.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|---|--|---|--|---|--|-------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Powder River to Big Horn River: Agricultural Interest Group Analysis

I. Specifics of an Agricultural Perspective

A. Lifestyle and “A Job I Really Love”

Farming, right now at my age, is for my grandkids. I think it's very important for them to see where the basic needs come from. They have so much fun when they come to the farm, whether it's in the winter time when we're feeding cattle or in the summer time when we're irrigating. My wife has wanted me to retire for three or four years. My grandson loves it and that kind of makes my day. And I love what I'm doing. And you better put that in there. I'm not going to retire from a job that I really love doing and go somewhere and park cars at the Metra, or anything like that. (*Rosebud County Agriculturalist*)

I like being associated with the Yellowstone. You worry about the cattle and stuff, but generally, the river is a plus to me all the time. (*Custer County Agriculturalist*)

If I sold this ranch, I would lose my identity, I guess. And I would lose my character. That's what would probably happen to me. I would maybe sell this. But I don't think the town of Terry needs another town drunk. That's probably all I would be. When your family has been here for that long of a time period, you just create some sort of identity from the land...My life is based more on the history of the land and a lot of people don't have that. (*Prairie County Agriculturalist*)

In 1936, my father got a pump and put it in the river. And then he got a wagon and this team of horses and a steam engine. And he put the steam engine down by the river here, and he'd pump the water with it. Then he'd hook up his horses and he'd go up in the hills here and mine coal. And then he would come back with a wagon load of coal and throw it in the steam engine and pump water. (*Prairie County Agriculturalist*)

I guess you...[have] to be born and raised on a sugar beet farm to really appreciate the amount of energy and work that it takes to produce a sugar beet crop.... And I don't know if a lot of people know how hard sugar beet farmers work to get that crop; I mean, it's a challenging crop to raise. (*Treasure County Agriculturalist*)

The young people...[who] are farming here are very sharp, and they are very intense. They're survivors. We still have to be raising some of these people...because the work ethic is not [what it] used to be. And the sacrifice: you're going to eat a lot of noodle soup and stuff like that. And maybe drive not too nice a vehicle [because] you're going to have equipment. (*Rosebud County Agriculturalist*)

I take personal pride in a lot of stuff....The people that are here are good stewards of the land. The other people don't sense that....Just being here, I keep saying we probably have the best of all of the world. People take it for granted...[but] we just appreciate it. (*Prairie County Agriculturalist*)

We get along. Everybody knows each other real well, up and down the valley. (*Treasure County Agriculturalist*)

[There isn't] a better place to raise kids. If my son isn't playing football or basketball, he is down fishing on the river. It is pretty hard to get in trouble doing that. (*Treasure County Agriculturalist*)

One thing we have...is an irrigation ditch association, so we're bonded all together on this ditch. And it's for everybody's benefit that things are done well and right. (*Rosebud County Agriculturalist*)

That's how I would rate it: agriculture, then business, then recreation. (*Rosebud County Agriculturalist*)

As far as farming-wise, there's probably a lot more disadvantages than advantages. (*Treasure County Agriculturalist*)

I haven't thought about the future of people in agriculture to tell you the truth, because the ones I know around here, the young people, they're getting up close to fifty. They've been survivors, workaholics, not afraid to put the money on the line and that type of stuff. (*Rosebud County Agriculturalist*)

The real problem here is that I don't have enough land. There is no way [my grandson] could take over and pay for the equipment and the farm....We would have to be out right now scrapping for acres making this larger, so that when he got here, he would have a big enough unit that he could make enough money. (*Rosebud County Agriculturalist*)

Agriculture is in tough shape; maybe it's just because we're poor operators, but it's getting tougher and tougher. The cost of the machinery, the cost to repair it, the cost of fuel, the cost of fertilizer, the cost of spray—all of this stuff is just going crazy. (*Rosebud County Agriculturalist*)

I would be gone tomorrow if I could get something out of this. I love it here but the handwriting is on the wall. You can't afford to stub your toes on these places. The price of fuel is up. We are dealing with Mother Nature....We do love it here. I don't know what I would do if I left here. I couldn't go to town. (*Prairie County Agriculturalist*)

I'm up here in the wintertime and it's colder than hell and the wind blows 30 degrees below zero. And you're trying to do something with a cow. And there's one acre of land and some idiot will pay you 200 or 300 dollars an acre for the land. And you're freezing your ass up here and there's no grass growing. It hardly rains, you know. I mean, it's

tough. And I guess where it probably affects things most is that my children, now 22 and 20, don't see...[the farm] as production-driven like [when] I was raised. (*Prairie County Agriculturalist*)

[Concerning the possible coming of corporate farms,] I think as far as production goes...I wouldn't work as hard for someone else as I would for myself. You won't get the production. And maybe they don't need it because they have the money. I would never put the time in for someone else that I do for myself. (*Prairie County Agriculturalist*)

Without the river, we wouldn't be able to make a living on this place....Our canal system is very important as we have to irrigate; it is a very dry area. (*Rosebud County Agriculturalist*)

I watch high water come down here every spring and I look at that and I just say, 'look at all of that wasted water.' (*Treasure County Agriculturalist*)

Punk wood is driftwood. If you get a piece of punk wood that has been in the water that's very porous, and if you light it, you can smoke it. And it burns the holy heck out of your tongue. And why anybody would want to do that is beyond me, but, as little girls, my cousin and I did this and now I won't let [my children]. But, that's punk wood. So, that was our first smoking endeavor. It was punk wood and you have to find just the right piece from the driftwood. (*Treasure County Agriculturalist*)

I am, was, an avid boater. It's kind of...beyond me. I'm 70 years old now and [I] don't do some of the things I used to do. We used the river for a lot of recreation. We raised a family on the river; water-skied in it, fished in it [and] floated the river, which is very enjoyable. It's better than boating actually, because the floating is quiet and you realize the wildlife and the bird life and everything that's on the river. (*Treasure County Agriculturalist*)

B. Land Should be Productive

They've wanted to reseed the cottonwoods, I've heard, and a few things like this. Well, you're not going to let the cottonwoods grow in your field anyway; you're going to tear it up and get it ready for next year's crop. So, you know, I feel like it's the right of the landowner to be able to stabilize his banks when needed and he needs to do it responsibly, there's not doubt. (*Treasure County Agriculturalist*)

If, for instance, landowners start selling off their water rights to municipalities or something like that, you take the water right away from the land; what's it going to produce? It's going to go back to...dry land...Maybe he has the right to sell his water rights. But, it affects all of us; it doesn't just affect him....Price per share might go up; you might run into maintenance difficulties even though we do have [access] easements. (*Treasure County Agriculturalist*)

There's some good ground towards the river and there's some ground that's really very sandy ground. And some of it is maybe not as good....In this area, it seems like our fields along the river are smaller fields and choppy. They follow the river and they're not nice and square. And you get away from the river and you get against the hillsides, you...[have], you know, a lot bigger and blockier fields and they're a lot easier to farm. (*Treasure County Agriculturalist*)

Recreation is important. But it has nothing whatever in value compared to the high yield land and the farm possibilities on that river. And then the power generation, too; that comes from the river. (*Custer County Agriculturalist*)

In this day and age, you don't really base things on production like you used to. You base it more on the assessed value and what it would be if you sold it. That's the way that land along the river is....It's getting less production and more 'what's for sale,'....Now, if a person went to sell this ranch, it would sell more for recreation value than production value...it used to be ten, 15 years ago, and you'd see the productions of the crops would be the value of it. But now when a person comes, like when that real estate agent comes and we looked at it, he put a value of \$700 on it based on how many whitetail deer ran out of the trees and how many 'coons there were. (*Prairie County Agriculturalist*)

But, [putting land into production] does not increase the value anymore. It's recreation....For instance, up here there used to be three big sprinkler systems—three big pivots—and they...[were] put in there for production of the land, production of crops, [to] feed more cattle....I sold them...and I just irrigate, I just flood irrigate. I could put a sprinkler up there and I could raise a lot of crops. But, where I live here, if I want to sell it, I would have a high value just for recreation or the opportunity to increase production. What I'm trying to say is, I could go out here and I could buy a big sprinkler that costs, say, \$150,000 to irrigate 200 acres, or I could not put it in there, and it's still worth the same amount of money, because some people would buy it for the potential for production versus if it was in production. (*Prairie County Agriculturalist*)

[It] is very important that you...base things on the value of the property, based on what it would sell for, based on its production. Well,...[now] that production is [turning to] recreation....People are buying things more for the investment value than production value. (*Prairie County Agriculturalist*)

There are archeological finds up here that we keep to ourselves. And I could take you up and show them. But this lady said what I need to do is just take somebody on a trail ride and just camp next to it...and let those people find it. And that's what the value would come from. Now, if people want to come here, we go show them things, and that has a value. But she said where the value would really come would just be from letting them find it....I've found numerous things that you just find...[by] accident. But that's where the value is; it's getting to be that's where the value is more than anything else. (*Prairie County Agriculturalist*)

C. *Rural Ideals*

The way I look at it, if we don't take care of our land it won't take care of us. If you abuse the land, you're not going to be there very long. (*Custer County Agriculturalist*)

I don't care who you are—you've got to be a good neighbor. (*Rosebud County Agriculturalist*)

The river can be damaging...but that's not a consistent thing. But nobody down here and around here builds close enough to worry about that. (*Custer County Agriculturalist*)

So few locals want to be involved....They look high and low to get people [involved. But, many people will complain.]....If it's so much in your heart, hop on board...and you will have input. The things I go to [regarding the river]...there is room on there for input. I mean, people just are too complacent. [They ask,] 'How in the hell could you ever do anything to change the scope of the Yellowstone?' Well, you can destroy that river.....People...just don't think that it's ever going to happen. (*Prairie County Agriculturalist*)

There's no reason why they can't fix Intake Dam. It's got to take somebody that's got heart who wants to put heart and soul into it. That isn't just a job for an agency person. It's got to take people that are on the land that are willing to go above and beyond the call to get involved. And then put credibility into it, not that agencies don't have credibility, not that they don't have good people. But, there's that division of the 'us and them' mentality. And the *us* have to become *them* to make it really truly work. And then it drags; it's that black hole effect. It drags a whole bunch of other folks into it. (*Prairie County Agriculturalist*)

People that have really good intentions and a lot of money and a lot of influence try to tell us how to better our world. Well, we kind of know how to do it. We don't really need somebody telling us how. We don't tell them they need wolves in Central Park. (*Rosebud County Agriculturalist*)

We had a deal with John Deere. They had a bad gear box on a chopper and they knew it was bad. They kept it on the shelves for a year. It takes us six hours to change it and it would run for two hours and break again. There was nothing we could do about it. They could have cared less. That is corporate America, corporate greed. I have used John Deere for 34 years and it was a low blow. It definitely works on you. (*Prairie County Agriculturalist*)

People have never been hungry in this country. Have you ever seen a famine in the US? My dad came from Belgium and he has seen it. He was in World War I and the soldiers came in and took over all the food in the garden. They took the cattle and the milk cow. Like the potato famine in Ireland; those people have learned to protect their farmers. If this country has a problem, they throw money at it and that may not be the best answer. (*Treasure County Agriculturalist*)

I believe there needs to be some help [such as cost-share programs]. (*Rosebud County Agriculturalist*)

They're still so afraid of having government involvement....And, I hate to say this, but a lot of those guys, they're in farm programs, and as long as they can take money out of the farm programs, well, then the programs are all right. But then, boy, there better not be any kind of strings attached....I can sit out and bark because, for three generations, we've not taken government handouts, or government programs, or government aid of any sort. And, until you get yourself...there, and then stand back and view it, these guys don't have a lot of room to complain about government involvement....I think we can...put [ourselves] in a position that we can protect that river as a resource and it can be there for generations to come....[In terms of accepting regulations] sometimes, along the way, there's some bitter pills that has to be swallowed. (*Prairie County Agriculturalist*)

Other people use the river [for] fishing [and] boating, but I consider agriculture and urban areas as big consumers. (*Rosebud County Agriculturalist*)

That guy, across the river there, he's farming, he's planting corn, and he's just three-quarters of a mile from me. He lives next to the river, he's planting corn there, and he's thinking of this river to get water out of it, to raise...[his crop]. And he's looking at it [as] production only. That's what his land is going to sell for, based on production. And my land values are different....My personal values are different....When you lose that production value, you lose a lot of drive, and then personal pride. You know, it's not lazy, but you lose a lot. (*Prairie County Agriculturalist*)

D. Individual Rights are Important

You can't, in my opinion, you can't take a landowner's right to say 'no' away from him. If he doesn't want anybody on [his property], that's his prerogative [and] that's his right as a landowner. (*Treasure County Agriculturalist*)

Most important for me is that no government people can tell us what we can or can't do on our property. (*Treasure County Agriculturalist*)

E. State and Federal Management Techniques are Questioned

I do know that I consider the riverbed not mine, I consider the river not mine, and I consider up to the high water mark not mine. Like when the water is running right now in the June rise, everything above that is mine, everything below that is the state's or [it's] federal or [it's] the people's. (*Custer County Agriculturalist*)

It seems like the Fish and Game wants to spend a lot of time dabbling in our business, too. If they own the game, why don't they pay a pasture bill on them then? You know, they're so concerned that we have them. You know, no one's concerned about 50 head of deer standing out in your alfalfa field eating. But, if the neighbor's 50 sheep got out in your pasture, in your alfalfa field, you'd be upset as the devil. (*Custer County Agriculturalist*)

Well, who owns the fish? And, whose gonna take care of the fish in the river? The Fish, Wildlife and Parks seems to think that they own the fish in the river. But they want us to take care of them. They think that maybe there are some fish coming down this canal. And, our feeling is, if your fish are getting in our canal, you should put up a fish screen. Because, if there are any fish in that canal, they aren't bothering us. I think if they own them and they want to keep them in that river and out of our canal, they at least should help us put in fish screens, or whatever it takes. They shouldn't expect us to take care of their fish....[They should] cost-share or something on these fish screens....I think it is only right. We, on the canal, have older water rights than the Fish, Wildlife and Parks... our water rights are 1918 and I don't think Fish, Wildlife and Parks started until 1940. So, we have older water rights, and that's already been proven in court, basically.

(Rosebud County Agriculturalist)

The Fish and Game have total control of the river. Even if we are swimming and we don't have our life jackets on, they are the controllers. It is pretty well regulated. The boats have to be licensed each with a fire extinguisher. Now, they have pulled the high water mark thing. They are in charge. They have total control. Everyone that goes there has to conform. It is heavily patrolled. You will find them there....It is about money. They have their wardens. They sell the licenses. It is not only fishing. It is also hunting. They make a dollar off the whole thing. *(Rosebud County Agriculturalist)*

Fish and Game has an attitude that, if you won't let hunters on, they won't help you. What they are trying to do is blackmail you into allowing hunting. Deer run in cycles like rabbits. You may have 500 to 1000 one year. And five or six years later they will have 100. They die off and stuff. If the numbers are high, they should issue six tags instead of two. They will do deer counts and they know the population has grown. Instead of issuing the permits, they will hold it until the ranchers are annihilated by the deer population. They are trying to force you into opening it up to hunting. *(Treasure County Agriculturalist)*

We used to have the goose hunters. Fish and Game said that we weren't letting enough hunters on. I told them I was going to separate them and limit them to be safe. They said it wasn't fair. This is my workplace! I have this guy I hired and these people are out there blasting away in my workplace. They think I should let everybody on, like you owe it to them. I am saying bullshit—get the hell out. I am not over harassing you at your workplace. *(Treasure County Agriculturalist)*

I know the endangered species thing; it's a real problem....I just can't see the merit in it. Like if they're going to dump a bunch of water out of Fort Peck and our reservoirs up here to save some moth or something like that—I don't know what good that would be. And I wouldn't want that to be first priority, but the Corps kind of does that. This spring, it was a Pallid sturgeon and I suppose that's plum legitimate; it's an endangered species. And they have raised the river levels for spawning. There's only a few of them left. So they took water out of Fort Peck and Canyon Ferry to raise the water levels so the fish could spawn. As long as they didn't really hurt anybody else too bad, there's nothing wrong with that. *(Rosebud County Agriculturalist)*

When they put Fort Peck in, we were supposed to get cheap power and that hasn't happened. We could have 50 thousand acres more. We have that much water rights. You ought to see some of the plans. This was back in the early '50s. There could be twice as much irrigation. (*Prairie County Agriculturalist*)

F. Outsiders Have Obvious Wealth and Different Values

I think if they are buying it as recreation property, it should be taxed that way....Those people don't contribute to the community. (*Treasure County Agriculturalist*)

Bigger money is coming in. [One group]...bought four places. They watch what they do and they are good people. There are a lot of these people like that, but a lot of people don't know what is going on. (*Prairie County Agriculturalist*)

The people that own this in the future probably won't bring the [same] historical [and] cultural values. (*Prairie County Agriculturalist*)

I drove up there to the ranch a couple of weeks ago and some woman was looking at it. And she wasn't looking at cows; she wasn't looking at grass. She was looking at this, 'Geez, man, you got to get some dudes up here. You got to get people up here and show them this. Take them on trail rides and stuff.'...She wasn't looking at cows, you know. And she wasn't looking at the grass as far as this is a gamma grass and this is western wheatgrass and that's big sage and little sage. (*Prairie County Agriculturalist*)

You visit with a guy from Pennsylvania and you look at it from his viewpoint. Hell, the damn thing hardly rained; it's a desert, you know. But, to him, it's awesome. And this is my workplace and other people come and they think it's just great. I guess that's just something that changes your viewpoint or whatever. (*Prairie County Agriculturalist*)

We get new faces and they try to tear it up and buy this expensive ground and they want to farm it right to the edge. Just the lack of knowledge, I guess. It should actually be planted back to grass. (*Prairie County Agriculturalist*)

Make them guys live here and when it gets to be 40 [degrees] below maybe they will leave. Everybody wants a piece of Montana. I don't know what the answer is. It is part of a free system where, if you have money, you buy something. You have the right to buy it. You can't compete if you want to buy more Ag land. (*Treasure County Agriculturalist*)

II. Agricultural Descriptions of the River

A. Ambivalent Sentiments about the River's Character

Where we live here, we are isolated by the river, so it makes us more connected to the river, because the river is between us and the outside world. It's at our front door and it's just there. (*Prairie County Agriculturalist*)

It is like having an artery in your body. It is a vital part of this valley. It is the lifeblood of the valley. Our irrigation district was co-founded by our granddad. (*Treasure County Agriculturalist*)

One thing about living on the river, I think it develops your character. I mean, it makes you. When you live along the river, you know you're different. It develops your character a little bit versus if you lived in the mountains....It makes you more independent. (*Prairie County Agriculturalist*)

[We like] the scenery and the wildlife. In the spring when the flowers are in bloom; you think that smells better than anything you can spray in a can. (*Treasure County Agriculturalist*)

Another thing about the river is that it connects you more to the history of the land....In the beginning [it] was created right here along the river....Custer and all his people...[came] up the river, the steamboats...[came] up the river, and all the first early history was based off the river. You can live 40...or 50 miles off the river and you don't have the feeling of history that we do. (*Prairie County Agriculturalist*)

The Yellowstone...[is] the second fastest flowing river in the United States. I think the Snake is faster...I think that the Yellowstone flows at...seven miles an hour. But it's a good river and it's pretty clean. When they dammed the Yellowtail, that stopped a lot of the silt because a lot of our silt was coming out of the Big Horn. Big Horn and the Powder both run a lot of silt and it cleaned the water up a little bit. But, most of the time, it's a pretty nice river; it runs [and] it stays where it's supposed to. (*Custer County Agriculturalist*)

As we grew up through the years, we learned to respect the river. You didn't just go down and go swimming, even a good swimmer. We have seen different people go across on horses and drown. It is a treacherous river. It is fast and a lot of undercurrents. (*Treasure County Agriculturalist*)

It is our livelihood. (*Treasure County Agriculturalist*)

That's a big river. That's a large volume of water, especially when you have a wet winter and a wet spring....An acre-foot of water that comes down that river is huge. I guess it's the last really free-flowing river in the United States. (*Custer County Agriculturalist*)

I just enjoy the river. I just do. I guess just watching what can be on the river. That river has a wealth of entertainment on it that people don't realize:...watching the ducks float by, watch pelicans come in, and eagles fly over. (*Treasure County Agriculturalist*)

I have something that very few people have. I own land along the Yellowstone River. I have rights to use the water in the Yellowstone River....I did sell a little piece of land along the Yellowstone River and a lot of my...[family] got very upset at me because I

sold a little bit of land along the Yellowstone River. There's not very much of it. (*Prairie County Agriculturalist*)

It is very scenic. We take it for granted. You come out here and see the badlands....I get so many comments on this picture about the scenery in the background. We don't think about it too much. It is probably one of the nicest places here. We are close to the Interstate. (*Prairie County Agriculturalist*)

There's 50 species of fish in the lower Yellowstone. I mean, it's so dynamic. And it's just a diverse place, if you live on the banks of that thing. (*Prairie County Agriculturalist*)

I lived before the Clean Water Act. I saw that river before the Clean Water Act. The best thing that happened in recent times to us...was the Clean Water Act. I mean... you can actually go down and take a canoe and float down that river. You can actually pretend you were Lewis and Clark and a lot of places, you can almost feel like you're in a time warp and *be* them because you can't see the debris....I mean, it was a grand cesspool at one time....Anything you didn't want, well, what are you going to do with it? Well, throw it in the river....The big flush was the June rise. It took all the ranchers' and farmers' [trash] along the way [and] private landfills all along the way, and...the same with all the towns....[Now,] everybody is screaming and yelling...because of the Clean Water Act. Now they got to have sewer lagoons and they got to have treatment plants, [and they say,] 'Oh, that's gonna cost too much.' We all survived. All the cities and towns have survived. And the rivers are better for it. But de-watering is where the rubber meets the road. That's where we're going to get into a wreck. (*Prairie County Agriculturalist*)

It's unpredictable and it gives you a sense of excitement sometimes. (*Treasure County Agriculturalist*)

Coalbed methane water is perfectly good to drink. And what it is, is sodium bicarbonate— same thing as baking soda. That's why us humans, or livestock, can drink that water and do fine on it. But if you put it on any soils that have clay on it, it slicks together. It dissolves the clay particle and just becomes very slick. So you get these real slimy spots that don't grow anymore....See, all the coal seams have sodium bicarbonate in them and they pump it out to reduce the pressure so the gas develops. And then they take the gas out. Then they pump all this huge amount of water and dump it in the river....The rivers are going to be the result of what we do with these extractive processes and, if we don't take care of them, we're in peril. That's the bottom line. (*Prairie County Agriculturalist*)

It's such a beautiful example of a prairie river. It's almost as magnificent to me as Yellowstone National Park in respect to the river, the falls, and the whole bit. The dynamics of a prairie river are just hugely significant and hugely important. And you can live there your whole lifetime and never know all the things there are about it: the dynamics of the river, and the way it works, and why it meanders, and what causes it to meander. (*Prairie County Agriculturalist*)

I can't imagine anything that I can pass on to future Americans, future family, future friends, generations down the road, as a resource as magnificent as the Yellowstone River, intact, for generations to come. It's almost as sacred to me as Mount Rushmore; it's as sacred to me as the falls in Yellowstone, all of these natural wonders, these great places and things. Because it runs through a lot of our lives, we can't be complacent that it will always be there. (*Prairie County Agriculturalist*)

B. Flooding and Ice Jams

We've sandbagged...when [we thought] there's only gonna be a few more inches of rise in the river and you've got some crop or something you want to protect. (*Treasure County Agriculturalist*)

When we have the floods, it's great. The flooding is wonderful because it brings the cottonwood seeds in and we have new cottonwood stands which will help the bank....We like that for stabilization. But we haven't had a good flood for a long time. I can't remember the last good flood. (*Treasure County Agriculturalist*)

Flooding. Ice jams. A nice, spring day can go real quick to being, 'Oh, my God!' (*Treasure County Agriculturalist*)

It was in '78 when the river flooded. We [lost] seven acres.... [The bank] had a straight edge and we were losing every year. After that flood came through, it made the bank gradual and the trees that grew up are incredible. Mother Nature took care of it and we haven't lost a foot since. Those trees now are pretty good sized cottonwoods. (*Treasure County Agriculturalist*)

C. Yellowtail Dam: Communication Problems and Jurisdiction Confusions

A big rainstorm came during fairly high water and they had to turn Yellowtail [Dam] loose [by] open[ing] the gates up by Yellowtail....I've seen pictures of some farms below the Big Horn and they had tractors sitting out in the field and all you see is the smoke stack on the tractor. (*Treasure County Agriculturalist*)

I really think that since '96 they've done a lot better job....They had to because [before] they weren't doing their job....They were slipping up. They want to fill Yellowtail [Dam] every year. They want it full. Well, that's good. But if you're going to do that, make sure that you got room for your runoff. Don't fill it, and then let the runoff come, and then decide to dump it on us. And they weren't monitoring their runoff as well as they should have....And they've been doing a lot better job....If I remember right, Conrad Burns even called them up. (*Treasure County Agriculturalist*)

We have had a lot of flooding, but not in the last few years. It's been pretty good. Depends on how they operate that Yellowtail Dam....If they wait and release water when this Yellowstone is high,... it floods....Last time they did it, they flooded everything. They waited until June, which is our high water time anyway. And they opened that thing

up. We lost a lot of crop. Water...sat out there for two weeks; not only that, but it changed the whole channel of this river completely....They never should have done it....They probably have caused more erosion than all the farmers could cause in the next 100 years. (*Rosebud County Agriculturalist*)

The Army Corps of Engineers controls it, I think....They did [notify us] for a few years right after that flood, and then they quit again....Well, now that's the biggest problem. (*Rosebud County Agriculturalist*)

We used to get ice jams. We haven't had ice jams for years. I think that has a lot to do with Yellowtail Dam, too. I think that warm water coming out of Yellowtail Dam has kept the ice from getting too thick. (*Rosebud County Agriculturalist*)

There is always going to be moss. The lower the river, the more moss you will have. If there is a controlled flushing, it would be nice if they could control it when it was a little easier for us. I don't know if they are doing it because of fish spawn. If that is the case, it has to be what it is. It would be nice if they would put information out. (*Treasure County Agriculturalist*)

Before they put Yellowtail Dam in, you had a lot more ice. It was thicker and bigger. When the ice is breaking loose in the spring and it moves through the river channels like a big plow. Ice is turning and twisting. [It's] gouging the banks, creating more channels, and putting more deposit in. Just plows the dirt and trees and everything out. With the warmer water from Yellowtail, we don't have the bigger ice flows and the thicker freezing of the river. It is a two-edged sword because that part is good for winter. (*Treasure County Agriculturalist*)

There have been several battles about how they regulate the water in Yellowtail [Dam]. Sometimes, when there is a lot of runoff, they will dump water and it will cause excessive flooding down here. It is well documented that this is an ongoing thing. The state and the Feds don't agree on this process. We have had several go rounds on this. (*Rosebud County Agriculturalist*)

III. Living with the Yellowstone River

A. The River Takes What it Wants Via Erosion

I have places along the river where I see [erosion], but, to me, it is a characteristic of the river and I realize it's a natural thing. So...it's not a problem for me because I think it's a natural thing....I see the river going up. I see the river coming down. I see the ice jams. I see all that stuff....I've lived along here for a long time and you're not going to do...[anything] to stop it. The more you do to stop it, the more it's going to erode. (*Prairie County Agriculturalist*)

In my opinion, most of all the rip-rap projects...have been done wrong. It's because people have not taken the time to assess, 'What am I doing?' What do I want this to look

like? and What are the true reasons [why] I am doing this?' You know, if you analyze all those things before you go in there...hopefully you'd come to the realization that you'd give the river some room. So that when it comes its day in June that it needs to go over the banks....It has...[somewhere] to go. You could stack the dirt up 40 feet high and just keep narrowing it up. Well, the river is going to rev up so fast that Jesus Christ himself couldn't stand on the bank and keep the bank from disappearing....I mean, we just got to pay attention. (*Prairie County Agriculturalist*)

I imagine it's lost ten acres since we've been here. (*Treasure County Agriculturalist*)

The erosion is a big one. You can't believe the erosion. I will take you right over to it over there. There is a house over here. We rented that piece of ground when I was in high school. That was 80 acres and there is maybe an acre left. That...[happened over] 40 years. (*Treasure County Agriculturalist*)

What do I do about the erosion? Stand back away from the bank. (*Custer County Agriculturalist*)

If they don't watch the water like they should....It is sandy ground [and] just the normal river flow takes out the ground. (*Prairie County Agriculturalist*)

You need to rip-rap the corners of the river, but leave the straight-aways alone. The river can meander and it has....It has probably been all over this valley. (*Treasure County Agriculturalist*)

B. Rip-Rap Seems to Work in Some Places

About the time they put the rock in, the river was on course to change anyway, see, so it hasn't eroded since then. (*Treasure County Agriculturalist*)

The only rip-rap I've really seen that works is when they went down and [bull]dozed the gravel out of the river and pushed it up...sloped it...If you keep it nice and smooth, the ice doesn't seem to bother that....It's got to be sloped so that it's smooth. But we've got the full force of the river because we've got a 90 degree turn. (*Custer County Agriculturalist*)

You can rip-rap against high water, but the ice—you can't rip-rap against it. You know, it could just take everything. You can't believe the force behind it. (*Custer County Agriculturalist*)

I think there are places where Mother Nature isn't going to slope the banks. The conditions were just right for that to happen that one year. Most generally, if you have a straight off bank, it just keeps cutting in a little at a time for years. (*Treasure County Agriculturalist*)

You slope the bank, then you cut a two and a half key down into the gravel [and] backfill that with large rock. We put, I think, eight inches of gravel on the side slope and on top of that, we put a yard and a half of big rocks per foot. It was just rip-rap. (*Rosebud County Agriculturalist*)

I planted grass along there and it's kind of sodded-up now. And we have one spot where it makes the curve and the water hits it pretty hard. And I've had to put a couple of big rocks in there now and then, because it's trying to eat a hole into the rip-rap. If it would do that, it would just wash it out, like water. I watch that pretty close, [and] when it looks like it's pretty weak, we get another rock or two down there...I suppose maybe in 50 years [it] might disintegrate. I can see a little bit of that on that now. It's okay. (*Rosebud County Agriculturalist*)

I don't want old cars down there and I don't want any concrete rip-rap. If it could be done naturally, I don't want the Yellowstone turned into a ditch. We were down in California and the Colorado River is a ditch and it made me very sad. (*Treasure County Agriculturalist*)

C. Rip-Rap and the Potential for Shifting the Problem Elsewhere

You have a bend in the river up here by Billings somewhere and they put some rip-rap here because it's cutting. They put a bunch of rip-rap in here and all it's doing is...narrow[ing] it down. It just creates more energy and it just erodes over here. (*Prairie County Agriculturalist*)

I think it's a good approach. As long as it doesn't wash out the neighbor on the other side. (*Prairie County Agriculturalist*)

If you stabilize it on one side, the water has to go somewhere. Maybe it is best to leave it alone. (*Treasure County Agriculturalist*)

D. Rip-Rap and Difficulties Getting Permits

That guy came down from Helena and looked. He said it needs to be rip-rapped. And when he made out our application he changed it and said that it will be an ongoing project. So he made it so that if we need to rip-rap there some more, we just go ahead and do it, so we can protect our pump site....He showed a lot of common sense. I said well, really what we should have done is just started there so everybody else could have rubber stamped it after he made his decision. But, it seems like the Fish and Game wants to spend a lot of time dabbling in our business too. (*Custer County Agriculturalist*)

I just feel like landowners should have the ability to stabilize banks, you know. You're farming along the river and it doesn't do any good to have that water on your fields. And I don't really think it does the river any good either. (*Treasure County Agriculturalist*)

You have to go through quite a process of applications. (*Treasure County Agriculturalist*)

[I] always have had such a time getting permission to do something about river erosion. But, I've always looked at it and wondered, 'Is it better to watch that dirt fall in the river all the time and all the soil going down, choking up the waterway?' 'Is that better than doing something about it?' (*Treasure County Agriculturalist*)

I don't know if you could jump through that many hoops. That is something that they should make easier, besides the cost. You should be able to go through the hoops a little easier to do some rip-rap....Sometimes they will work with you and sometimes it is tough, especially on the Yellowstone. They watch it pretty close. People want it left natural...I can see their point-of-view. (*Treasure County Agriculturalist*)

The most difficult part of getting it done is you go through the Corps of Engineers and then the Fish, Wildlife and Parks, and then the DEQ. I think it ought to be good enough if the Corps said it was needed that would be enough...So many entities... [are] involved and who wants to be in complete control? Maybe [you could] deal with one department. As it is now, you have to go through each and every one of them and it makes a complicated issue more difficult. (*Treasure County Agriculturalist*)

We started [rip-rapping] when it was under a cost-share [program] that's no longer available. As a matter of fact, it's frowned upon; you have to get a permit to do it now. And you have to go through the Fish and Game, the Soil Conservation, and they are the easy ones. (*Rosebud County Agriculturalist*)

The barbs are the answer. Now whether you need blanket rip-rap or not depends on the conditions. Getting through the Corps of Engineers—that's the tough one....The Soil Conservation says this is good. Fish and Game is in love with the barbs because it makes some excellent still water for fishing. But then you've got the Corps of Engineers. They would like to do it, too, but they work with the federal government, so they have a problem. (*Rosebud County Agriculturalist*)

E. Rip-Rap is Costly and Few can Afford It at an Effective Scale

The first estimate was about \$300,000....The way it sets now, the only one that can turn the river is the railroad, or the government. (*Custer County Agriculturalist*)

There's quite a lot of expense to that rip-rap. (*Rosebud County Agriculturalist*)

It is beyond us little people. The railroad tracks were about to wash in and they rip-rapped up there. The estimate was for \$800,000 and it ended up being \$1.2 million dollars. It is beyond us little people. (*Prairie County Agriculturalist*)

We are so gung-ho on making sure we don't have soil erosion. We have to leave stubble on the field; we have to have a certain slope to the fields to prevent erosion. The biggest monster for soil erosion is the river. The reason they don't touch it is...[the] environmentalists and it is so costly. It takes a lot of money to rip-rap a river. We poop

that away every day in Iraq....We don't take care of our own country and our own people, just like this river. (*Treasure County Agriculturalist*)

F. Other Techniques

People have put chunks of sidewalk in the river. Then you have pieces of rebar sticking out and that should be cut off before it is put in the river. The price of concrete is so high. There has to be a different way of doing it. (*Treasure County Agriculturalist*)

I don't know a lot about jetties. I guess they're really coming in to play and I'm sure if you talk to lots of people all along the river, I'm sure you'll run into some that have put some of the jetties in. And I know they've got one right over here even. The Hysham water users, I believe, put them in. And maybe they're better than just rocking, I'm not sure....I don't know if they're cheaper, but maybe they're cheaper to put in, that might be an advantage. But I think the Conservation Service likes them. (*Treasure County Agriculturalist*)

We put a Cristafulli pump in the river. Instead of fighting that river and changing it, we put in a Cristafulli, pumped into a sump, and would pump it up the hill. And they haven't said we couldn't put the Cristafulli in the river, so that's how we do it. (*Rosebud County Agriculturalist*)

They seem to be having pretty good luck with the jetties....They are a little less expensive than completely rip-rapping the bank....They seem to kick that water out and it will silt back in behind the jetty. (*Rosebud County Agriculturalist*)

When we were kids, we were down by the river, by Hardin...[There was] a car in the river [that] still had a motor in it. We got the motor out and put it in an old car and that thing ran for years. (*Treasure County Agriculturalist*)

The barbs, they're looking to be very effective. We have one over here, [but I] haven't had time to get in the river with the boat. I wanted to take another look at it, to see how well it's working. It worked well last year. I think it's a good approach as long as it doesn't wash out the neighbor on the other side. (*Rosebud County Agriculturalist*)

I was talking to an old-timer that said they had a bunch of steel mats that the airplanes could land on in World War II. It is linked and you can roll it up. You could roll that out into a riverbank. I don't know if the army has surplus stuff or not. It would hold the bank together. You would have to go on past where the river turns. Maybe anchor parts of it on down. This guy was saying he didn't know why they didn't use them. They had a surplus of them. (*Treasure County Agriculturalist*)

We had a hole starting in the bank. I took some Russian olives and set them over the bank. I set the root on the next tree on the limbs and kind of stacked them up. We raise hay barley and wherever we plow a ditch, we would have to swath through there, because you have this hay barley in the ditch. I baled off the hay barley when it was green with no

twine. I dumped that big green bale on the Russian olives and spaced them out. The next year I came back [and] it was all silted up and kept it from washing away. It was building and [it] protected the bank....If they could take the Russian olives, which are basically a weed, and clean them out [it would help]. All of the limbs and leaves collect debris in the water....I think they should take a stretch of water and try it. What if it worked? It would be a cheap fix. Look at a beaver dam; parts will wash out and they repair it. This system here, you may have to have Russian olives or willows sitting there to put back in, but you could repair it. If it doesn't work, then figure something else out. I think it is worth a shot. (*Treasure County Agriculturalist*)

Ideally, I would like to see a dam on it, but I think we've passed that opportunity. At one time, there was quite a bit of engineering done; they were going to put a dam above Livingston. Now they've developed housing so much along the Yellowstone that it probably won't happen. (*Rosebud County Agriculturalist*)

G. Rip-Rap and the Question of Fish

I know rip-rap is a bad thing for the Yellowstone according to the Corps of Engineers and a lot of other people, but you know there were a lot of catfish caught there. When that was put in, people asked to come fish and they would fish along that rock or the rip-rap. And that was where the fish was...and water quality [improved]. There's no soil or silt being emptied into the river and going down. I think the Corps or some groups are saying that rip-rap is bad, [that] you're controlling the river and that's not good; let the river do what it wants to do. But if your farm is going down there, you're not too happy about that. (*Rosebud County Agriculturalist*)

H. Rip-rap and the Question of Aesthetics

This rock was marble and was brought in from Illinois on flat cars. They hired someone from Dickinson and they strategically placed the rocks. They did a beautiful job. They have willows planted and passes for the deer to follow down there....Old cars and cement, nothing like that is good. (*Prairie County Agriculturalist*)

IV. The Public Demand for Access is More and More Problematic

A. My Land versus Public Access

I think that the recreationist and the rancher, we have more things in common because we both want to use the land. What we need to do here is to always have a multiple use concept. And I mean, once we get to a single use, we always want to think of multiple uses. I mean, the recreationist can use it, irregardless of ownership....And I best stay away from that subject. (*Prairie County Agriculturalist*)

It is hard to access. We are fortunate that we have access to the river. (*Rosebud County Agriculturalist*)

I'm very possessive of that land....I can tell you my feelings, which may not count, but we go down there for peace and quiet. And [my spouse] and I were down there one evening and it was just beautiful. I can't believe that a boat came down the river and parked right in front of us and anchored. My feeling was, 'Please get off my river. I am here for peace and quiet; you are really disturbing me....' But what really bothered me was that possessive type of thing. And then I had to laugh because, you know, it's their river, too....[How] could I say it's fine for me to go there and [for them to] stay off my land? That's very selfish, and that would not happen, but I would doubt whether I would ever vote in the corporation to open it up....That is probably the primary...purpose—for that land to be with my family...to have a place to go that nobody else can go. (*Treasure County Agriculturalist*)

I don't like these guys restricting these school sections and denying access. They should be able to get to it. In every township, section 16 and 32 belong to the school. It is public. If they have it surrounded, they can deny access. I don't know if that is in every state. For years up here, there was a landowner that had control of the school section and leased the place to an outfitter and he had exclusive use of that. I think that is terrible. It is public land. (*Treasure County Agriculturalist*)

The phone starts ringing in mid-August. A lot check and see what it is [Block Management]. We ask them to call in advance. We have room for several, but when it is full, I restrict it. Come mid-January, we are glad it is over. Some of the people are the greatest guys in the world. Great people. (*Treasure County Agriculturalist*)

I think there is a recreation importance that's...[growing] all the time. (*Custer County Agriculturalist*)

Now most private land is being guided. In my opinion, 70 to 80 percent is. What isn't being guided is being bought up by hunters. The hunting and fishing is a commercial venture....When you get to Bozeman [and] Missoula, if you want to do anything, you fork over 300 bucks. Get a hold of a guide to go fishing. (*Rosebud County Agriculturalist*)

B. Abiding by the "Old School" Rules of Accommodation

Someone will come to this door and they'll say, 'Can I go agate hunting?' Hell, yes. And they can just go agate hunting along the river here and they don't have to worry about anything. And they have a certain amount of peace to themselves. (*Prairie County Agriculturalist*)

I have a theory that when the hunter comes in here, I don't mind the hunter as long as he don't ask where the BLM land is. And as long as he...[doesn't] kick my dog for peeing on his tire. (*Prairie County Agriculturalist*)

I get a little pleasure watching people hunt and fish and enjoy themselves. [Maybe] get a deer or a big fish, or a big agate. It's kind of neat. We enjoy campers, too, because we'll go down there and pester them. Make them feed us. (*Custer County Agriculturalist*)

I let anybody hunt that wants to and it works extremely well because the hunters that come here regularly love it and they discipline the other hunters. So we don't have a discipline problem; it's a self-controlling thing. (*Rosebud County Agriculturalist*)

Well, we've got one hunter, he's a personal friend...[and,] being a coach and a school teacher, he knows a lot of people and knows how to talk. So he talks to the hunters. He's down here quite often. And, he talks to hunters that are down here and explains to them the reasons they should behave themselves. He mentioned to me a few times about some that aren't doing things. He's a little bit particular about them, [and there are] some things that he thinks are unsportsmanlike....He goes beyond the discipline I would and he takes care of that. (*Rosebud County Agriculturalist*)

The river is a real recreational asset...someway or another landownership should be encouraged to give access to the river to a population that...[doesn't] have access. I think that should be encouraged. It would make life better for everybody. (*Rosebud County Agriculturalist*)

C. Access and Abuses

To get on my naughty list, you drive through a gate, don't tell me and don't fix it. That's happened a number of times. You leave a bunch of garbage lying [around,] that will do it. You maybe hunt without permission. That's happened; you know,...not taking care of the land and stuff—that's how you get on the bad list. (*Treasure County Agriculturalist*)

They have the right to go on the river, but not through my property to get there. I don't ever want to stop [them]....I don't pay attention to what they're doing, because 99 percent of them appreciate what they're doing. (*Custer County Agriculturalist*)

That's just one of the things [about living here], these guys coming down in boats and hunting on private property. Sure, there's state land here, but they don't know where the lines are. Maybe the state should fence it....We've had two horses shot. We've had a calf butchered. We had a cow shot, too. People used to have respect. I don't think they have respect like they used to. (*Rosebud County Agriculturalist*)

If you run people off, or you turn them in to the Fish and Game, [the authorities] don't do anything to them....Secondly, it makes them mad at you. So, they'll come back and shoot your cow or calf....One [cow] got butchered. It was probably somebody that we run off. I don't know. I'm on this deal [and] I put gates at night so that they can't get in. They took a log chain up and ripped it open, tore apart the fence. That's just spite because they can't get in. We put up 'No Hunting' signs. And [we] paint up there off of Highway 12. No matter—they still come in. (*Rosebud County Agriculturalist*)

We have lived in many areas in our life and conservation is just pretty important. And I've just picked up too many diapers and too many beer cans in places I feel that are public use. You know, we've always been quite generous with certain things, but people do take advantage of it. (*Treasure County Agriculturalist*)

During the hunting season...[there are] people coming up and tying a boat up and hunting on the land. They are the worst hunters out there. They will shoot cows....One year, we had two. We had a steer in the fall that they shot and covered up with leaves. (*Treasure County Agriculturalist*)

What is high water? This is a federal waterfowl area out here and you have to be away from the high water mark in order to hunt geese along this stretch. There are hunters that push that. (*Treasure County Agriculturalist*)

There are people that will come unglued if you step off the sidewalk onto their grass in Billings and they are the same people that expect to use your property out here. (*Treasure County Agriculturalist*)

As more and more people move in to Montana, there is more hunting pressure. It is wide open to the boaters. They come in and park on your place and you have no idea when they are coming. Like last year, they found two deer gutted [and lying] on the bank. We have had people that have shot deer off boats on the private land. One person came up with a boat and threw their puny antelope and deer off on our place and got another, bigger deer and antelope. To me, it isn't watched close enough. (*Treasure County Agriculturalist*)

D. Denying Access: Avoiding Abuses and Liabilities; Generating Income

Everybody comes to hunt on the weekend. I had a guy stop and I told him that I had too many hunters already on and he could come back during the week. He was madder than hell. Last year, we said, 'To hell with it!' and closed it and leased it out to five individuals. You hate to do that. These guys formed a hunting club and leased it and they hunt it. Everybody else is out. That is too bad, but they forced me to do it. I had hunters that would come on drunk. Some would come on without asking. (*Treasure County Agriculturalist*)

If someone bought this...you wouldn't be here interviewing [me] and you probably couldn't get access here either. I mean, that's the thing....Look at the Ted Turner syndrome, you know....They bought all that land and then just closed it off from all the people using it. (*Prairie County Agriculturalist*)

I think if there is ever somebody reported for doing something like that they should be banned for five years. We do Block Management and I had one guy that came down a couple of times. He was rude and obnoxious and a total jerk. He called one time and was rude to my daughter. When I got home that night, I called him at eleven o'clock. The Block Management people called me the next day and I told them what this guy's name

was and they put him on the list so he won't draw any special permits for five years. As far as bad hunters go, if there is a way to catch them, they shouldn't be allowed to hunt. (*Treasure County Agriculturalist*)

I like them better than outfitters, mainly because they are not associated with Fish and Game. These private guys, they just have to get a Montana license when they are on your place. A guide has to have a work plan that he turns into Helena. If he doesn't turn that in, he is in trouble. A guide will take as many big bucks off as he can. He won't leave anything for seed. Five guys aren't going to take as much as an outfitter, who is getting paid per day. A guide will say if he gets a big buck he will give you \$1500. Do you think he is going to come and show it to you? He isn't going to tell you. He will drive off with it. That is another reason I don't like them. (*Treasure County Agriculturalist*)

E. Access as a Benefit to Agriculturalists: Block Management

I'm somewhat of a believer in letting the public use your land as long as they're responsible....For instance,...Block Management,...[has] been working real well for us. And hunters just appreciate it, because, you know, they're having such a tough time getting onto private property to hunt and stuff. As a landowner, I don't mind them hunting, and they appreciated it. As long as they take care of the property, I think it's beneficial to us. And, the fact is, they keep our deer population and stuff in sync. So, that's a good program. And...I still have control, because I can tell somebody, 'No, I don't want you on [our place].' We keep a bad list. (*Treasure County Agriculturalist*)

We know landowners that let people on to hunt at \$1000 a buck. Who can afford that from around here? So, [Block Management] keeps the availability open to them. We have had people come in and say, 'I can't believe we've never heard of this and this is wonderful. Do you guys like salsa?' They'll give us gifts. You don't have to give me your mother's salsa. We used to have, before Block Management, a lot of gifts given, And, I'd tell them, 'Signing your ticket is your gift to me now.' But, we still get a few people who want to give you something....We used to get jars of whiskey, hams, turkeys, cheese from Wisconsin, and fish. (*Custer County Agriculturalist*)

We have more waterfowl. We have goose hunters from as far as North Carolina. We are in Block Management. We get ten dollars per hunter. It was temporary, but now I think it is permanent. It is strictly voluntary. It has brought a lot of revenue to this neighborhood. Most around here is from \$3000 to \$5000. (*Prairie County Agriculturalist*)

It only takes one person to turn you off. It doesn't take much to say, 'Why am I doing this?...What is ten dollars per hunter?' To me, it is birdseed for your trouble,...[and] when the money for Block Management ran out,...[landowners] didn't get paid. That isn't right. If they don't have the funding, they need to let them know. (*Treasure County Agriculturalist*)

We are in Block Management. Last year we had over 400 hunter days. We don't let just anybody come. We manage it right. We limit how many can come. (*Treasure County Agriculturalist*)

V. *Life-forms of the River*

A. *Wildlife*

The warm water from the Yellowtail [Dam] keeps the river open. As long as the river is open the geese stay....Just the other day, I was down there and there's a bunch of pelicans down there. (*Treasure County Agriculturalist*)

Prairie dogs. They're going to take this country over. We've got prairie dogs up the river here and they're up on our pivots, on our hay fields, all the way across here. They're even down on the bottom....Get rid of the prairie dog—that's the number one thing right now that's eating us up....For these outfitters, you can give somebody a couple \$100 to go shoot prairie dogs, [and], well, that's a good deal. What they don't realize is that [a] couple \$100 is a drop in the bucket to what the prairie dogs...[are] doing to their ranch or their grass or our fields....They're all over; they are a problem. (*Rosebud County Agriculturalist*)

I blame the prairie dog problem on Lewis and Clark. If they'd have called them prairie rats instead of prairie dogs, it would have been better. (*Custer County Agriculturalist*)

People want to protect the prairie dogs and stuff. [It would be like] if we went to the big cities and told those people that they couldn't poison or trap the rats. You know, a rat in an apartment in a big city? I don't think [it] is any different than a prairie dog on our place. (*Custer County Agriculturalist*)

Mosquitoes. Yeah, skeeters. (*Treasure County Agriculturalist*)

Sharptailed grouse, sage hens, [and] we've got wild turkeys, we've got whitetail, mule deer, antelope, geese, pheasants, sharptail, and sage hens. That little flock of sage hens up here on the pivot that I don't want people to shoot—guess what, they shot them....We've got pheasants from here all the way across the dryland all the way over.... I like to see them; I like to see those sage hens, those sharptail. We used to feed them up on top....It's just like feeding chickens. But somebody comes along and shoots them. I don't know who does it, because if I did, they'd be in trouble. (*Rosebud County Agriculturalist*)

We used to have a lot of sage hens at the old place and they get gentle. Well, we used to have two sets of flocks of sage hens and long about the middle of summer, they would always come in on the irrigated hay fields. One old hen, she was crippled, she had a limp, and we always kept her. She always had a brood of chicks....Well, I said, 'Sage hens are good eating, but nobody shoots them on my place.' If you ever want to be back on my place, you'll never shoot one on my place. (*Custer County Agriculturalist*)

I'm concerned about the wolves and lions, yes.... Wolves are bad and the lions are too. But I'm concerned. I've got three little grandsons, triplets, that are seven years old, but, you know, if these lions get too thick and stuff, they'll stalk them kids when they're out playing. And that would be just devastating. And I know that we've got eagles that sit in these trees down here when we're calving. They'll swoop down and get the afterbirth and stuff. I've seen them do that. I haven't seen them kill a calf or anything. (*Rosebud County Agriculturalist*)

I've never had a ticket or a run in with Fish and Game, but when they start telling you that they're going to go here and there. [If] they ask, 'Do you mind?' I'd probably say, 'No, go ahead.' But they say, 'I'm going to go up there and count the sage hens.' You don't have to count the sage hens; I know how many there are. When somebody tells me [rather than asking me], I bristle up a bit, especially on my property. (*Rosebud County Agriculturalist*)

Flooding is not a problem. No, I think that's natural; I don't consider that a problem. The beaver, is it a problem? Yeah, it can be if it's not controlled. (*Treasure County Agriculturalist*)

They put that diversion dam in over here and they held it up for a long time and finally they said, 'Let's put some cement things out and the fish can come out behind that.' That was okay then. The first winter the ice took all of them away and the fish still cannot get up the dam. (*Treasure County Agriculturalist*)

We've got the wildlife. This is a very natural place for the geese migrating down. And we have some of the better goose hunting right in this area because the geese...like the river formation....It's the wildlife; we have a lot of deer...In the fall...they come over and eat beet tops, and regrowth on the alfalfa hay. You can go out there and...wait until they come out in the evening and take your pick. The wildlife is very important and enjoyable. (*Rosebud County Agriculturalist*)

B. Cottonwoods

Now, my brother is right across the river here. He's been there for probably about 30 years. He said one year a big old cottonwood tree floated down the river and kind of hung out, out there in the middle of the river. And he said he thought he should go out there and move that tree. But he didn't....That silt started building around that. And now it is a huge island and it is taking his place. It's just a cottonwood tree, hung up out there, and just started silting around it, and built a great big island....Now, it's a pretty good-size island and it is forcing the water over into his place. (*Rosebud County Agriculturalist*)

And the cottonwoods, they take 1000 gallons a day. In the fall, when the trees and stuff go dormant, the river raises ten inches. All of them trees and stuff, all the water that they're utilizing—how much [are]...[they] sucking out of the river on a drought year? (*Rosebud County Agriculturalist*)

C. Exotic Invasive Plants—Noxious Weeds

Right now, we've got leafy spurge something terrible and it's going to be a battle that can't be won. You know, all we can do is try to maintain it as best as we can. We got the county helping us. And we do some spraying and the county does some spraying. (*Treasure County Agriculturalist*)

The salt cedar and stuff like that—I'm sure that I'm not the first one that's mentioned salt cedar. It's a big problem. It hasn't been, but it is now. You've got the Canadian thistle; you've got the knapweed. You've got everything coming down the river....It's getting down here and it's coming down the river. (*Rosebud County Agriculturalist*)

I'm thinking that the state should do this. The federal government should do it, [and] not necessarily all the weight on the state. We spray for knapweed or Canadian thistle out of our own pocket. Now, there's some cost-share. But these chemicals and all of this stuff is high priced. (*Rosebud County Agriculturalist*)

I asked the weed board, which is a certain amount of our money goes toward, I asked...[the county]to come out and spray...and they don't do that anymore. They contract it out, and that's another sore spot....The guy that's doing the weed spraying on contract, he's getting rich off of people, including the county, the state, and the whole works. (*Rosebud County Agriculturalist*)

We see a problem in the increased Russian olive and salt cedar. And we are experimenting with [different ways to control it]. (*Treasure County Agriculturalist*)

The Russian olives have completely overgrown much of the island. Much of our river land is overgrown with Russian olives. (*Treasure County Agriculturalist*)

One thing that I think is important is the salt cedar problem. I don't know how that will ever be controlled. Maybe they can with some kind of a bug or something they can import in that will eat that up. The river down there, it's just completely saturated. And, the stuff takes 200 gallons a plant and they're as thick as a willow grove up and down the river there. They're everywhere. (*Rosebud County Agriculturalist*)

The geese bring it in. We are starting to see Roundup-resistant kochia. Lamb's quarters is our worst weed. Pigweed was [a problem,] but it took a hiatus. (*Prairie County Agriculturalist*)

We have a little critter called salt cedar. It is controversial. It was brought in to dry up wet areas....It has migrated here. It was brought into swamp areas. It has taken over, instead of [the] willows and native plants. The salt cedar comes in and chokes these out and dries up the sloughs that create the riparian areas. It is kind of a problem. We have been fighting it on a local level. The Feds haven't been too interested in helping. (*Rosebud County Agriculturalist*)

D. Moss

It periodically comes...it's been there before any of us can remember. But the Upper Tongue River has the same problem as the Big Horn. It's a living thing and it goes through a year's cycle. And it dies and it moves on downstream and it comes into the Yellowstone. And if you have lower flows and it starts moving out of the Tongue into the Yellowstone, then people are going to see....At times, it's really bad; you get it onto your fishing line....Well, that is something that has a lot to do with the Tongue River and the clarity of the river up there. Because it's laden with moss where it wouldn't have been before the dam went in the '30s. But there's scarcely...[anything] we can do about that. (*Prairie County Agriculturalist*)

When they go to flush the moss out of...the Big Horn, so the fishermen can fish better, it kind of bends us over, down here....It plugs up the pumps and tubes. Rolls of moss, unbelievable, coming out....You never know when they might do that....They don't tell you. (*Treasure County Agriculturalist*)

We used to get a lot of runoff from the Big Horn before the dam. It had a lot of clay in it. It would get in the river and it basically didn't let the sunlight through. The water was so dirty with the clay particles. You didn't have a moss problem. Anglers will throw their line in and come up with tons of moss. We have the same problem in the irrigation ditch. It clogs the pumps and the lines. It grows on the bottom of the river. In the high water, you can see it and it dries out and looks dead. When it gets wet again, it grows again. (*Treasure County Agriculturalist*)

E. Corridor

When you...mention a river corridor, I think there's going to be a 'dam' police here. That's my honest opinion....I mean, if they put an interstate through here, well, the first thing they'd do is they'd get to put a highway patrolman here. I don't want you to think I'm an outlaw or anything, but that's what I think of. (*Prairie County Agriculturalist*)

I have heard of the corridor, but you'll have to define it for me. (*Treasure County Agriculturalist*)

VI. Management Priorities

A. Concerns

[I'm concerned about] weeds, for one thing, noxious weeds, and out-of-state money coming in and buying all the places. (*Custer County Agriculturalist*)

Probably education [would help]. Educate people [so they know] what [the weeds] are, and what they look like. (*Custer County Agriculturalist*)

They [the Yellowstone River Conservation District Council] want to do this and they don't want to fund it. When this first project came in, there used to be a drain with a dragline and now everything has changed. They worked hard and got things producing well. You don't see that anymore and I don't think you ever will. I don't know who to trust them to. I would like to see people that have come up the hard way to be on a council and they would do a good job. They aren't around much anymore. (*Prairie County Agriculturalist*)

You need to have someone to oversee the development of the river, especially as it progresses, and we become more and more populated, in their need for more recreational country, as well as the use of the water downstream. We have to be extremely careful that the Corps of Engineers doesn't limit us and damage us with the Yellowstone and the Missouri, as well. So, you need all the information you can gather so that you are able to intelligently talk to those people, tell them why we have to have it. (*Custer County Agriculturalist*)

They need an expanded role and it's got to be political. I don't like politics, but that's the way it is, in getting good, logical Corps of Engineers specifications for controlling erosion where it should be done. They can draw up a plan and specifications for controlling erosion. Draw up the parameters on where it should be done and where it shouldn't. They did and it was kind of a fight, and they were correct... Some constriction of the river should not be allowed....So, the Corps of Engineers are probably well meaning, but they don't have guidance. They need guidance. (*Rosebud County Agriculturalist*)

I don't think we need government or anybody to regulate us....[If we must have regulation,] I would go more for state, or even county. I think the closer you get to the people at the local level, the better. (*Custer County Agriculturalist*)

Sodium from the surface wells...[that are] dewatering the coal seams. See, all the coal seams have sodium bicarbonate in them and they pump it out to reduce the pressure so the gas develops; then, they take the gas out. Then they pump all this huge amount of water and dump it in the river. (*Prairie County Agriculturalist*)

You know there are certain people that feel...[strongly] about that. There's some people that don't quite frankly give a damn about that. What about the sicklefin chub? That's another endangered [species]. [Or] the bluefinned chub? That's another endangered species in the Tongue River. But, the fact remains,...it's far better off to have done something and be proactive about it. People aren't so scornful of agriculture ruining the land or your doing this wrong and that wrong and it's raising hell with the environment. It'd be pretty hard for someone to say that I'm not concerned about the environment and I'm not concerned about the future of Montana in respect to the rivers....If it's gone ten generations away and it isn't there, they're not going to know what they missed, but wouldn't it be nice to do all the right things so that maybe it is there. So that maybe there's a few people that maybe have the same attitude that I have that we need to keep going with this thing. (*Prairie County Agriculturalist*)

Cities, obviously, have to have more water, [and] are more important than farms. I'd set the priority at cities—that would be the highest priority. Probably select manufacturing, like the electric plant [second], [and] probably third would be agriculture. And we've got to put recreation below agriculture, because recreation can stop and go without very much economic problems, or people having bad misfortunes for people. (*Rosebud County Agriculturalist*)

Absolutely, bar none, [dewatering the river] is absolutely the...[biggest] thing. The next most important thing is fish movement past diversion dams, but dewatering is actually even worse than that. (*Prairie County Agriculturalist*)

I think the land along the Yellowstone River should stay natural, that's my feeling. I don't like what's happening out west....Back when I was a kid, it was fine to drink out of the streams, but you don't dare do that today. Geez, what did we do to those nice mountain streams? What did we do to those mountains? And we can do the same thing to the Yellowstone, but we don't need to. It's undeveloped and I think it needs to stay undeveloped....Those little cabins and stuff along the river and the creeks, that's just for somebody's personal pleasure. We all live here just a short time; we have other generations that need to see this and enjoy it, [they] need to see it the way God created it. That's why, I guess, I got a deal on the [conservation] easement. Maybe I can sell it to the Fish and Game Department....[Only] it's really not selling it either, because I can still run cattle and do whatever, but it's...where I can't sell it to a millionaire so he can own it to say he has some river frontage on the Yellowstone River in Montana, just because he has a lot of money to play with. The personal pleasure thing, again. This is happening all over, this personal pleasure thing. (*Custer County Agriculturalist*)

I don't want it to change, that's the big thing. We got to keep part of this world the way it is....You've got to preserve some of the prairie and rivers. Building cabins along rivers—we're not talking oil production or coal production;...we're just talking settling somebody's desire. And they clutter up our mountains and they can clutter up our prairie, too. We don't need to do that. (*Custer County Agriculturalist*)

[In order to have a lot more water] you'd have to build a dam up in...Paradise Valley or somewhere up in there. And that is such a beautiful area, you'd hate to see that lost....I'd have a lot of misgivings in this day and time. At one time, I was real strong in favor of it. I think it is important for future generations. You know, I suppose that's as important as the land we irrigate now, [but] we already can overproduce what we sell. So, it's hard to say. (*Custer County Agriculturalist*)

I'm not in favor of ruining the quality of the river, whatsoever....[We have] feedlots, and there's certain restrictions. A few years ago, the state had developed something where you couldn't allow any of your water running through your feedlots to enter into the river....I would have to say we need to be very careful there....I built my corrals over here and the county agent says it's not here now, but it's going to come someday. When you build that corral, make it somewhere where no water can get to the river. (*Custer County Agriculturalist*)

A lot of pumps and sprinklers have gone in, in the last five years....Something has to be done. They can't just keep taking water out of [the Yellowstone River] and expect to have water for projects that have been in here....since 1918....Somebody...has got to start controlling access to that water. There has to be a limit on it somewhere. I mean, they're pumping water clear up on the flats....You know, the high flat? They're pumping water that takes two pumps and a lot of electricity. And it is very expensive, over a million bucks, to get that water up there to sprinklers....I think the State of Montana should take control. (*Rosebud County Agriculturalist*)

With the water and the amount of people that there is anymore, we're more in jeopardy of losing our water rights, so we need to keep our water rights....A lot of your downstream people come up with some idea [that] this water is theirs, too. They pay taxes. They're a citizen of the US. We need to keep all of it here that we can, for development and agriculture and those types of things in Montana. (*Rosebud County Agriculturalist*)

Anytime we are this close to the river, the chemicals end up in the river....Big shots don't want that, but you are going to see more and more chemical use....Silt is another thing that [ends up in the river]....When you are flood irrigating, those things are going to end up in the river. Society is going to want less of that as time goes on. We have seen some good changes. It used to be that empty five gallon [chemical] buckets were all over. The industry [now] has shuttles so we take the containers back. That is good and I think you will see more of that. (*Treasure County Agriculturalist*)

B. Water Rights

Water right adjudication is another thing. You always wonder what they will come up with next or who is going to say, down river, 'No, that is my water.' (*Treasure County Agriculturalist*)

The state [has to regulate]....Somebody with a lot of clout [because] if you go over and tell the neighbors, 'I don't like what you're doing,' you might not make it back to your own land. So, you would have to have some upper enforcement, like state regulations. (*Custer County Agriculturalist*)

[The Role of the Council] It's all going to have to shake out. It's going to have to get grassroots support, but it's going to have to result in a certain amount of regulation, [and] a lot of people are going to grimace about that, but I don't quite see how a lot of things are going to happen....There's going to have to be some regulation on water to keep that free-flowing. Politicians and the people that are going to make the decisions; there's always a price tag on it....[So] we've got to have....some mechanism that allows us to view the river as something that is so sacred that it's not for sale at any price. (*Prairie County Agriculturalist*)

We have approximately 300 acres and we get 726 acre feet of water. It is like two and a half feet and you are assessed. You get overage so you pay overage. You don't get it back

if you don't use it all....[There is] no incentive to [not use the water]. You are charged regardless. (*Prairie County Agriculturalist*)

Probably the most important is working with the Corps of Engineers to get a reasonable method of controlling erosion along the river. Every one of these little towns has to have an intake for water. They need some kind of control, guidance, engineering, that sort of thing. Farmers need it. We need more help from those people, to get the Corps of Engineers educated as to what we need, what will work, what's functional. (*Rosebud County Agriculturalist*)

Farmers have a reasonably good reputation. If a major portion of the farmers would let the town people camp on their ground, hunt rocks, hunt, fish, whatever they want to do, if they had free access or relatively free access to a lot more land, we'd be the heroes of the earth, and we could get some pretty good things done, [even as] a small group of people. (*Rosebud County Agriculturalist*)

VII. Visions of the Future

A. Visions of Change

More than likely there's going to be change. You always think that it's going to stay the same, but it doesn't. (*Treasure County Agriculturalist*)

I think we'll see more sprinklers,...[and,] conservation wise, you're saving water. [We will] probably...[utilize] fertilizers better because you can put fertilizers through the sprinkler systems so you're not using as much fertilizers. You know,...[it's] just a better conservation type of system. You don't have runoff water. (*Treasure County Agriculturalist*)

I think it's all going to be corporate-owned and tenant-farmed, that's what I think is going to happen. Because there is a lot of money out there, but it's not in agriculture. And these people coming in, buying this land, are not buying it with money they made in agriculture, unless they sold a place in California and bought some cheap land in Eastern Montana. It's an investment; it's not going to work to buy it and pay for it and stuff. (*Rosebud County Agriculturalist*)

Our community is kind of dying. The high school has 30 students. The town is turning into a retirement community. There is nothing to keep the youth here. It is a typical Eastern Montana town. Hunting is getting to be a big deal. We are getting a lot of non-agriculture people buying for hunting. It is hard to compete when you are trying to make the land pay. (*Treasure County Agriculturalist*)

It hasn't changed in eight years for us, so in ten years I don't see much difference. (*Treasure County Agriculturalist*)

[My neighbor] is always accumulating lands from the folks that are dropping out. He has 500 acres there, along the river....He's picked up a lot of ground, [probably] 1700 irrigated acres. (*Treasure County Agriculturalist*)

I think the big thing that will happen [is]...mining that methane gas. That's something we will have to watch closely. I believe, and I am convinced, [if] handled properly, [we could] still do like Wyoming has done, and develop the use of that methane. I don't know if it would get this far up or not. I do think in the southwestern part of the county, we probably will see some development there. (*Custer County Agriculturalist*)

I hope that, and my prayer, and my wish is that whoever we lease it to, whoever is managing that, they will maintain good agriculture conservation practices so that we can have good farmland. And good grazing...so that it will remain a good productive land. (*Treasure County Agriculturalist*)

We are third and fourth generation. We are farmers and we are stewards of the land. We don't really want to give that up....People from other places come in and the land here is cheaper and a lot of places are getting bought up. People come to hobby farm, not to invest. It drives the prices up. The second, third and fourth generations are in jeopardy. It is financial. (*Rosebud County Agriculturalist*)

I'm just concerned about how much water's going to be in this Yellowstone River. Not only from agriculture, but from the housing [and] the urban development up and down the Yellowstone. (*Rosebud County Agriculturalist*)

I don't see the river changing much. I hope to see more sprinklers...[and] less drain water back to the river....That is a good thing for us and a good thing for everybody downstream. I think you will see more sprinklers. (*Treasure County Agriculturalist*)

Our kids don't want anything to do it. There is no future. It is so expensive. I look for it to be one big corporation some day. The youngest offspring that has stayed around is 34. The rest want no part of it. There are a lot that are up against retirement. We have a lot that is 60 [years] plus. This is really going to change in ten years. I am sure it will be corporate owned....I don't think it will be Microsoft or something like that, but somebody big with money. (*Prairie County Agriculturalist*)

[Rather than corporate farms,] I would just as soon see individual guys farming....If it is an outside business [that owns the farm] there is nothing in the community except for the workers. It is not like a personal business. Half the time, the guys working don't care about the cows or the ground. They are just doing it for the dollar....I would just as soon see individual guys do it. Farming is a heritage. The tax breaks, I am sure, help the bigger guys. (*Treasure County Agriculturalist*)

You go in the western part of the state [and] you can't have a boat with a motor. I would say we are headed to paddles, kayaks [and] canoes. We don't want that, but I doubt that we can prevent that. (*Rosebud County Agriculturalist*)

B. Pivot-head Sprinkler Irrigation

I see sprinkler systems taking over, and I'd like to have a couple. And, hopefully, in the next ten years when you sit in that tractor and look out, you might see some sprinkler systems that weren't there. (*Custer County Agriculturalist*)

There are a lot of benefits from pivots. They use half the water....They're run with electricity and that goes up every year. But,...in a dry spring,...when you don't quite have enough moisture to sprout your crop, there's water in the ditch which would be there pretty early if it's needed, then bring water in and you can run a circle around and get it sprouted....The guys with circles or sprinklers, they can add [chemicals] right in with their water, so that saves the airplane cost of applying. You can also put chemicals in there for weed control, but the way we handle the weed control on beets...has to be done early. (*Rosebud County Agriculturalist*)

Flood irrigating is cheap, but these sprinklers cost close to \$1500 per acre by the time you get the lines in. In 15 years, it will probably be worn out. You save a lot of water, I think. (*Treasure County Agriculturalist*)

[Electricity] from a coal-fired plant...is a lot higher. Over a five year period, you will see a 42 to 50 percent increase in the cost of power. Where does that leave you on your sprinkler? You got rid of a hired hand because one guy can handle a lot more acres but you have to pay the sprinkler costs and the power costs. Which is the best way to do it? Right now, it looks like the sprinkler, but I am sure the power is just going to get higher. (*Treasure County Agriculturalist*)

Another advantage to the sprinkler is the runoff. You don't have it. If you put nitrogen on your crop, it stays there and doesn't run into the river. That causes a lot of aquatic plants to grow more. (*Treasure County Agriculturalist*)

The fall of 2004 was when we switched over to sprinklers....Excellent. Production is somewhat better. That is a surprising thing. We have to build pressure for the sprinklers, but our overall energy bill is only ten to 15 percent higher because we're using so much less water. Of course, the original investment was huge; [it's] an investment analogy: you're not going to save it on labor savings, [so] production has to be better. It is better. Production is somewhat better, five to ten percent better. Fertilizer use is markedly less, that's 20 percent less. (*Rosebud County Agriculturalist*)

With the sprinklers, you can inject nitrogen in with the water, and you, more or less, spoon-feed a crop, so you can get a better use of it. Those are probably the two reasons why fertilizer is less [expensive]. Production is better because irrigation can be more timely, and you can irrigate, like in sugar beet production, you can irrigate a light irrigation when you don't need very much, for instance, in germination or first irrigation. You don't over irrigate like you commonly have to in flood irrigation. (*Rosebud County Agriculturalist*)

The original investment which was, I want to think,...500 to 600 dollars an acre.
(*Rosebud County Agriculturalist*)

Glaring detriment is the less wildlife habitat. We don't have the ditches; we don't have the drain ditches, and it's associated with our weed production. We don't have the weed production on the field edges anymore. We have large, open fields now, which...[lend themselves] to less weed production, more efficient equipment use, more efficient labor use. It does take away the wildlife habitat to some extent. It doesn't eliminate it, but it takes away some of it. (*Rosebud County Agriculturalist*)

Powder River to Big Horn River: Local Civic Leaders Overview

Fourteen interviews were conducted with individuals holding civic leadership positions, including city mayors, city council members, county commissioners, floodplain managers, city/county planners, and water/wastewater treatment managers. Participants were identified through public records.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|---|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Powder River to Big Horn River: Local Civic Leaders Analysis

I. The River Provides

A. The River is Important, Historically and Today

If you live in this part of the world, you're drawn to the river because it's water, and it's the only water source around. So, you're drawn to the river that way. People have always settled by rivers, lakes, or streams [for two reasons]: one, out of necessity, and, two, for an aesthetic value. (*Rosebud County Local Civic Leader*)

This particular community, Hysham, is wholly dependent on the river, because their house water and their fire department water...comes from the river. They have a waterfront treatment plant down next to the river. (*Treasure County Local Civic Leader*)

All rivers have some history, but as a gateway to this part of the state, it certainly can't be denied....Miles City, at one time, [had] steamboat landings there. (*Rosebud County Local Civic Leader*)

From our standpoint as commissioners, the [river provides] economic benefits for the local area....[It] provides irrigation for the farmers....It brings...the hunting and fishing people...[and it serves] our own recreational uses. (*Rosebud County Local Civic Leader*)

Our [town] water...comes from the river....Most of the municipalities and rural water systems that draw from the Yellowstone need a certain amount of treatment, not only with chlorine and anti-bacterials, but for turbidity, etc. (*Rosebud County Local Civic Leader*)

Occasionally, we're approached by the Irrigation District, which feeds from the river, to join them to repair [or] replace the weir....The DEQ is very concerned about what we do with our drinking water, for public safety. They're also very concerned about the discharge from the sewer plant. So that's continually monitored, 24/7, 365, [with] reports and samples. Nobody likes to think of a breakdown in a sewage plant anywhere along the Yellowstone...and [raw sewage in the river is] my major concern. The integrity of the river [is important]....The Yellowstone is not a river that I would consider drinking out of anytime of the year, unless it were treated first. (*Rosebud County Local Civic Leader*)

I think the consensus is, we are so far removed from the factors that contribute to the never-ending chain of float tubes and rafts, that striking a balance is not going to be a real concern here for a while. The long-term economic forecast is for steady decline due to continuing...migration...[from] this part of the state. I personally believe that is not accurate. We are seeing a turn around. We are seeing a trickle of people from the west

part of the state that are coming here. That is the recreational use of the river. (*Custer County Local Civic Leader*)

The north side of the river is extremely dry. Some of the names of the creeks explain [the situation]: Froze to Death Creek, Starved to Death Creek. They, quite literally, mean exactly what they say. (*Treasure County Local Civic Leader*)

B. Local Farms and Ranches Need the River

As far as agriculture goes, you can't deny the importance of the river. At the river's edge, [near] town, there is a weir that stretches across the river which feeds a major irrigation canal for the north side of the river. [The canal] runs miles and miles downstream. (*Rosebud County Local Civic Leader*)

This is an agricultural valley. There are many crops grown here [like] grains, and sugar beets; sugar beets are a prominent crop. When you get away from the river valley, it goes to cattle....If there was not the river, we would not have irrigation; if there was not irrigation, we would not have sugar beets, spring wheat, winter wheat, [or] any of the crops that...[are] in abundance along the river valley. (*Treasure County Local Civic Leader*)

The agricultural sector of the economy in Custer County contributes anywhere from nine to 13 million dollars per year. Much of that is generated in the Tongue River Valley. There is a great deal of irrigation that is derived strictly out of the Tongue....It is very important for this economy that the quality of the water in the Tongue River and downstream is acceptable to the kinds of crops that have traditionally been grown. If we lose the water quality, we lose a significant contribution economically to this community. The Powder is the same. These are stretches of water that just in normal runoff, that runoff is piling sodium load into the river. If we have additional sodium in the reservoir, we end up with a precarious situation for irrigation. (*Custer County Local Civic Leader*)

The water can be used for improving the communities that it flows through,...primarily [for] irrigation...[on] another five or six thousand acres on the benches. (*Treasure County Local Civic Leader*)

Another thing that's happening...[a lot] around here is sprinklers....You eliminate a lot of high labor....I know a family that...[has] a place with sprinklers on it. His kids have grown up and gone....We don't have any kids that do the farming now. (*Treasure County Local Civic Leader*)

[The river is] important. Our livestock water out of it, we receive our irrigation water out of it, [and] we run livestock next to it. (*Treasure County Local Civic Leader*)

C. Recreational Uses are Good and Have Minimal Impacts

I take the dogs into the river. I don't have a boat; I wish I did, but I don't. I'm boat-less for one of the first times in my life and it's killing me. We spend a lot of time on the banks of the river, just being by the river and listening to the river. I don't fish the river often. I'll fish the river with my grandchildren. (*Rosebud County Local Civic Leader*)

The river helps make a nice community, with the trees and stuff. That is probably why I moved to Miles City. I was real hesitant to come until I got here and saw what they had to offer. I fished on it for a number of years. I know that, without the Yellowstone and the Tongue coming from the other direction, the recreation would be very sparse. (*Custer County Local Civic Leader*)

Yes, we still do [allow hunters on our land]. We ask that people check with us, and we ask that, if they come to a gate that is closed, [that they] shut it....If that gate was open, you leave it open. Check with us when you come out, because we want to know that you're safe. As landowners, we want to know that you're safe. (*Treasure County Local Civic Leader*)

The people here that use the river are really appreciative of the river. I was the first one in the whole State of Montana that had a boat that you could run on that river when it's in low water, and I have a jet boat that I can go fishing with. I bought that in '95, and now there must be 15 to 20 of them. (*Rosebud County Local Civic Leader*)

We have scheduled a huge regatta with rafts on the second of July....There is a group of at least six people, and we have a couple of large rafts, and we will load up a large cooler and a battery-powered blender. We listen to the blues on the battery-powered CD player. We mix margaritas. We have a great picnic. It is usually a 15 mile float. We put in at Moon Creek. It takes about six or seven hours. Most of the float goes through Fort Keogh which is pretty nice. It is clean [and] quiet. There is a mixture of little riffles. In the times that we have done it, in the height of the summer, the largest number of boats I have seen on the river is three all day. (*Custer County Local Civic Leader*)

Forsyth is a great place to live. It's one of the best places that I've ever lived in my life, and I've lived in Portland, Seattle, San Francisco, then also in rural Oregon and rural Montana....This is my city of choice. Forsyth is a great place to raise kids, good school system here, good hunting, good fishing if you like that type of thing, pike, walleye, catfish, sauger. Go downstream and snag paddlefish when that happens. (*Rosebud County Local Civic Leader*)

I place a lot of value on wildlife, probably more so than some people....And that's why when we go out, I just enjoy seeing any kind of a new bird or other type of wildlife. I like walking or riding my bike. (*Custer County Local Civic Leader*)

There are two fishing accesses, one is a campground [and] both have boat ramps. It's a rare time, [maybe when it is] 20 [degrees] below and the wind is blowing 40 miles per

hour, when you will not find a fisherman at those accesses, either one of them....From geezers to young boys, fishing carries that image....Fishing is a big-time thing in our country. (*Rosebud County Local Civic Leader*)

Rivers are made for such things. People swim in it, [and] people float in it with inner tubes or rafts. A lot of kids in the summer will put in at Meyer's Bridge, which is on the other side of Hysham, and float down and somebody will take them out in Forsyth. That's a great float....Anytime in the summer, you can see adults and kids doing that....People fish on it. People hunt on it during hunting season, particularly [for] geese but certainly ducks. People will walk its banks just to walk the banks of the river. People will walk its banks to collect rocks because the rocks in this river are truly phenomenal....The famous Yellowstone agates, which, at the turn-of-the-century were considered semi-precious gemstones, were sent to New York, London, Paris and Rome to be cut into jewelry. There are two old-time collectors here whose backyards and outbuildings have nothing but these piles of agates that they have collected....The river gets a lot of use....My wife and I spend a lot of time on the river...Seldom are we alone, and we don't go to the easy access places. (*Rosebud County Local Civic Leader*)

[One of our assets is] this little "oasis." It is this old swimming area that is so charming to see it for the first time. I am instantly reverted back to six and seven years old and you would get up and you would go swimming all day. The water is from the Tongue....[In the future,] we might get water from the Yellowstone. (*Custer County Local Civic Leader*)

There's at least two fishing accesses within Treasure County [and] there's one more that's just across the Big Horn River. (*Treasure County Local Civic Leader*)

You have lots of fishing. There are people that go fishing all the time and a lot of them who like to go search for agates, up and down the Yellowstone, especially from here to Sidney. It's my understanding that it's the only place you find moss agates. (*Custer County Local Civic Leader*)

D. The River is Fascinating and Un-dammed, Mostly

It is a fascinating river to watch....I have seen it when it's been cold enough and frozen enough and ice-jammed enough to throw blocks of ice up into the field that are a story and a half tall. And when you look at that field in the winter covered with snow and these blocks of ice that look like they belong in a movie out of Alaska, and you realize that next summer there's going to be corn there, to me that's a fascinating natural phenomenon. And the color of the ice is magnificent in this river when it freezes....It has a blue-green cast to it, which is very much like glacier ice. (*Rosebud County Local Civic Leader*)

Personally, I love the river. I recreate on it. (*Custer County Local Civic Leader*)

It is taken for granted that people that live along the river understand the value of that asset and they really don't fully. (*Custer County Local Civic Leader*)

It changes every 100 miles. It's a fascinating river. (*Rosebud County Local Civic Leader*)

When it gets cold and clear, the river...steams a lot and that steam will frost the vegetation along the river, and that's truly magnificent. And it's unique to these type of cold water rivers....In summer, it's great because with the number of gravel islands that are close around the city; it's a perfect place for people to go out and picnic and camp. The Yellowstone, at least in this section, is very much an all-season river. (*Rosebud County Local Civic Leader*)

I don't have a farm or ranch on the river, [so] for me it's nice to go down and picnic or fish on the river. It's just recreational [and] it's nice to have it close. (*Rosebud County Local Civic Leader*)

That's another beauty about the Yellowstone—it isn't dammed. And it's truly a miracle that it isn't because there have been numerous thoughts about doing that all through its history. (*Rosebud County Local Civic Leader*)

I love the Yellowstone. It's a great river. Last of the un-dammed, natural streams....From its headwaters to its confluence with the Missouri, it's just a great river. (*Rosebud County Local Civic Leader*)

Some people find this area to be very desolate,...[but] it has the beauty of the river and the beauty of the drylands. It's very much a prairie/plains environment. The wind always blows, so you [had] better be ready for that. (*Rosebud County Local Civic Leader*)

It may not be dammed, but it's been rip-rapped, [and] confined. [There are] irrigation ditches and all the municipalities [take water] the length of that river. (*Rosebud County Local Civic Leader*)

You can live here and the river doesn't have a huge impact on your life one way or the other. (*Custer County Local Civic Leader*)

E. Noticeable Changes: Inevitabilities, Mysteries, and Improvements

When I was a kid,...[and] probably four-and-a half or five-feet tall, I could stand up against the ice....[Since] they put the Yellowtail [Dam] in, that water comes out warm....When we have a little ice jam, now, they are a foot, foot-and-a-half thick....The Big Horn water is warm....The water comes from underneath the dam, it doesn't come over the top. And, that water is usually 40 or 50 degrees, when on top it would probably freeze. And that's what keeps the water warm past us. (*Treasure County Local Civic Leader*)

Back as a kid,...you could go down and sit with a fishing line in the river all day and pull the hook out and never have moss on it. Now, that's all you catch, is moss. And above the Big Horn there's no moss in the river; that's the warm water making it that way.

(Treasure County Local Civic Leader)

The other thing that [has changed is that]... the Big Horn used to be a really muddy...[river]. The water would be muddy enough that the canals pretty much stayed sealed. Now, with the clear water, all the canals are leaking. It's destroying a lot of farmland. *(Treasure County Local Civic Leader)*

From the Big Horn River to the boundary of Rosebud and Custer Counties, you cannot hunt geese....It's a resting area [and] they did that for a place for them to rest....I think it's a good idea...Really, it makes it better hunting. This area is well-known for some of the best goose hunting in the whole state. And I think part of it is because they have a place to go and sit—[a] kind of refuge. *(Treasure County Local Civic Leader)*

From the Big Horn River down to the Rosebud County line, the river is closed to hunting. You can not go on the river and hunt. You have to go into the fields that are away from the river. Consequently, we have geese that live here all year long. And, if they hadn't closed that portion of the river, we wouldn't have that. *(Treasure County Local Civic Leader)*

To go to a lake or reservoir, it's easily a 150-mile commute, and, with energy costs now, we're seeing people look at the river. Ten years ago, you could go down to the river and there would not be hardly anybody there. It would be uncommon, now, to go down to the boat ramp and for there not to be somebody with a boat in the river. It's changed. The fuel prices have changed how far people are willing to go. They are looking closer to home than they ever did before. *(Rosebud County Local Civic Leader)*

II. Dealing with Flood Plains

A. Flooding and Dikes

Oh, yeah, some people have been [in the flood plain] forever....The farm and ranching operations that have been in that area... know...what the risks are. *(Rosebud County Local Civic Leader)*

Forsyth is quite secure. The dike is in good shape, and we intend on keeping it in good shape. The community of Rosebud needs help. We are planning to do some mitigation....The ice jams cause flooding. We have an area of the river...[that's] down by Rosebud and makes a sharp turn, and the ice packs up there. It always does. I can guarantee it. We have done some mitigation down in Rosebud....We built up the Dike Road by two feet so it isn't quite as bad. But the town of Rosebud is not a good place to live [during] high water. *(Rosebud County Local Civic Leader)*

I believe the dike is stable. I haven't heard a lot of negative on it....It does cause a lot of people to pay high insurance. There is a moratorium, or restrictions, on building in some areas. A pretty big chunk of town is affected by that—everything north of the railroad tracks. (*Custer County Local Civic Leader*)

The other issue that is of primary interest is the dike. Most of the north side of Miles City is in the 100-year flood zone. Everybody there is paying flood insurance. They would rather not. This is a town where the average income is a few hundred dollars over the federal poverty level. The dike, according to the Army Corps of Engineers, is not up to spec in terms of materials, and there is no way to replace that existing dike where it stands. So, the long-term plan is to back up the existing dike with a new dike. There needs to be a buffer zone of 100 yards, then build a more secure dike, up to spec in terms of materials, and either leave the older dike in place or tear it out....It is a massive project, budget-wise, for this community, and it happens when we have an infrastructure which has been aging and neglected for decades. We are fixing some of those critical infrastructure problems, primarily water lines and sewer lines. Those have to be our first priority, right now,...[but] for the people on the north side of the town, we have to get the dike squared away. The Tongue side is secure. The Yellowstone is the one that needs work. (*Custer County Local Civic Leader*)

You can look at that [Forsyth] city map...and, just by looking at the geology,...you know that, at one time, the river did run through here....It might have been 500 or 600 years ago, but the Yellowstone is a river that snakes its way from its source to the confluence, and, unless it's trapped...between the hard rock canyons, it weaves. Those rock or gravel islands,...you look at them one year and they're different the next year. And, maybe, three years down the road they're not there. They're on the other side of the river because the river meanders. So, anybody that lives along the Yellowstone that has any sense at all and knows anything about hydrology and the velocity and the flow of the river, [knows] it makes a tremendous difference. You can be 100 feet away from the river and end up ten feet away from it when it's over....Rivers like the Yellowstone, the Missouri—that's why they have such a gravel path, and that's why they had such a flood plain....Instead of being confined, as the Mississippi is, they would spread out. And that affects the velocity, and it affects the volume of that water, and the force that the volume carries. The faster it goes [and] the deeper it is, the more force it has. If it spreads out and gets tangled up in bushes, and trees, and shrubs, and has to run through all that, it loses its velocity....It's not nearly as damaging. (*Rosebud County Local Civic Leader*)

The dike is kind of a funny thing because if you look at the east end of it, it makes a big curve and it just stops. If there...[were] an ice jam in the right place, it would just run through here. (*Rosebud County Local Civic Leader*)

[Forsyth] is built around the river, and the city is protected by a dike. [The decision to build the dike was] influenced by what the old-timers will call the Great Flood of 1918, so it's nice to have the dike. We have a working relationship with the Corps of Engineers to maintain the city's responsibility for the dike. (*Rosebud County Local Civic Leader*)

I have an idea: if we ever have a real wet winter, all...[of a] sudden we will find the weaknesses in [the levee]...[that] will become an issue. But we haven't had enough runoff or water to say it's been a problem. There was a period of three or four years when there was quite a bit of ice buildup and ice jams....My husband was working out at the packing plant at the time and one night he really got scared. He heard the ice breaking up and there was ice coming on shore....If there is one of those winters where there is a deep snow pack and then we have a lot of snow—the two combined—then it could be interesting. (*Custer County Local Civic Leader*)

[The] Corps of Engineers require us to keep the dike from being invaded by trees and shrubs so that its integrity isn't ruined....They also want the dike clear [so that if] they have to get up on the dike...to work on it, they have a clear runway. Some people in town, regardless of their deed, rightly or wrongly, incorporate the dike right into their yard....[as] a little rock garden. Most people understand it's a dike, and they're not digging holes in the dike [to] make a water feature out of it....So, we have very little trouble with that. We only have one [continuing] incident where somebody tries to fence it off. Most of the time, we don't have any problem with that at all. (*Rosebud County Local Civic Leader*)

This area is fairly attractive to out-of-staters. They love the beauty of the area, and two of the key things they like are trees and water....They want to be right down on the water's edge. They want to stand on the porch and cast that dry fly in the water....The people who have lived here, and grown up here, and have seen the Yellowstone at it's worst—pushing those eight-foot thick ice flows 100 yards from the riverbank—have a lot of respect for the river. You can go out here and see the stars and the trees. The locals know not to build there. The newcomers do not....There's no understanding of the power of the Yellowstone or of the damage it can do. (*Custer County Local Civic Leader*)

[Locals] are thinking that, if the flood only comes every 100 years, they will take their chances...[and] there is a bit of animosity [toward those that don't pay for insurance because they live outside the flood plain]. But the people that lived through the last major flood in that part of town understand the need for insurance. Those that moved here in the last ten years haven't really paid attention to the water stains that are five feet high on the walls of the houses in that part of town. (*Custer County Local Civic Leader*)

Maintaining the dike area [for its] aesthetic value [is important]. Who wants to have a wall of concrete along the river? Then it's not a river, anymore. It's...been turned into a canal. (*Rosebud County Local Civic Leader*)

B. Little Sympathy for Building in the Flood Plain

We don't have the tools to say, 'No, you can't build there.' We do have the tools to say, 'Well, yeah, it's your investment, and [you should] understand that the Yellowstone can turn mean and ugly....And, if you're going to build, here's the requirements'....[Another restraint is that] Montana-Dakota Utilities provides the electric power and is particularly hesitant to put power poles in the path of ice flows on the Yellowstone. Those poles do

not stand a chance against a big heavy ice flow or a raging river. So they're reluctant to even do that; they recognize the problems. (*Custer County Local Civic Leader*)

In the old days, people would just abandon their houses, or hook the mules up to it [and] put some logs under it and roll it back. There's a lot of that in this section of the river. In fact, the whole town of Finch was moved....Rosebud...[is] very fascinating because the town is in three sections. Two of the sections you can see...because that's where people are living. The third section is across the river, and that's where the town was originally. (*Rosebud County Local Civic Leader*)

One of the most difficult assignments I had as a Conservation District Supervisor [was up]...along the banks of...the Bitterroot....[The difficulty] was keeping people from building right on the edge of the river. They [wanted] a 'river view.' We see that clear across the country....Any body of water...[is] majestic but also very dangerous, and [it] doesn't have much respect for human beings or human edifices....Of course, everybody wants to be there. (*Rosebud County Local Civic Leader*)

The new people want to hunt from the rocking chair on the porch as opposed to the long standing residents that aren't afraid to get out and hunt. It is not just them and the cannon; it is the house, and the well, the septic, and all the traffic in the riparian areas....Local people hunt and fish and then they leave that [river] area to go to their house. People coming in want to have their house in there. (*Custer County Local Civic Leader*)

Flood control is fine, but if you're that irresponsible in your money management that you're going to put a million-dollar house on an unstable bank, then don't cry for help because the bank goes away one day and your building goes into the river. (*Custer County Local Civic Leader*)

C. Flood Plain Maps and Designations Can Be Credible, but Must be Current

There's disagreement among hydrologists [about] whether that [1918 flood] was the 100-year flood or the 500-year flood. If it was the 100-year flood, we're due for it again. I have a picture of the [1918] owner in a boat on the front porch [of my house] so that really pretty much took care of everything in town. Everything was flooded. (*Rosebud County Local Civic Leader*)

We have a rough concept [of what] would replace that dike to meet Army Corps standards....[The new dike] would be inset some from the high water mark, and the Army Corps, also, is rather insistent on a substantial 'No-Build Zone' inside that....I have campaigned for a flood control system that [includes] a 'No-Build Zone' that we use for recreational purposes. With the community the size of Miles City, and a river like the Yellowstone here, it's just like a magnet for fishermen, for swimmers, and, to a certain extent, boaters and jet skiers....There's a substantial value in recreational potential....There are programs and procedures that the city could use to go about getting the land in [the flood plain] in their possession. (*Custer County Local Civic Leader*)

We maintain the flood plain maps here, [and] provide information to landowners as far as what property is in the flood plain....We just got those new ones in the last five years....I think they are accurate. (*Rosebud County Local Civic Leader*)

About two months ago, we had a big map that somebody gave us of the flood plain area....[The map has] the flood plain in the wrong area and it's costing a lot of people high insurance....And one fellow, he wanted to add a room on his house, and he [went to] get everything lined up, and he [was told] your insurance is going to double because you are in the flood plain. And his house sits way above the old shelf out there. Even if the Yellowtail [Dam] ever went out it wouldn't get to his house. (*Treasure County Local Civic Leader*)

You look at the Yellowstone and [you can see] how flat it is....The whole flood plain issue would have to be looked at, and although there's people wanting to come in and build their own dike systems and money doesn't seem to be an issue,...I wouldn't think you'd want to be any closer than 300 [feet]....An ice jam [can cause] floods for half a mile....It happens. (*Rosebud County Local Civic Leader*)

FEMA has told us they are producing new maps, and we're waiting. We are holding our breath, actually. This has only been going on for five years. There were some maps, but being a local, I understand this place floods, this place doesn't...So, even if it doesn't say so on the flood plain map, [sometimes I know it's] not a good place to build. (*Rosebud County Local Civic Leader*)

D. We Need Help with Noxious Weeds

The Russian olives [are a problem]....My dad said [they were] brought here in about 1920...[as] windbreaks. (*Treasure County Local Civic Leader*)

Salt cedar, that's a big issue, and a pile of money gets spent on it. There's some knapweed, but, you know,...they were brought it in for honey bees. I was just reading about it the other day. They brought it in up around Idaho and it took a long time to get started, but once it got growing...[it didn't stop]. (*Treasure County Local Civic Leader*)

We have solutions we can offer.... There are things you can do. Spraying is a little piece of all of those things. Producers are looking at managing a whole bunch of issues and weeds are part of that. I am here to help them with that and weed control gets further ahead by doing that and they figure it out that it is in their best interest to make that happen. (*Custer County Local Civic Leader*)

The Russian olives are thick on the bank....The roots go back in the bank and the water washes under them so that when they lean over,...they take a whole bunch of grass with them, probably the size of this table....One thing that these invaders have done, [they have] just about destroyed the habitat for cottonwoods. [The cottonwoods] are not reproducing anymore because of Russian olives....Cottonwoods are open underneath...so you got some grass...[for] grazing. Where these invaders come in, and it's so thick you

can't even walk between them. They pretty well destroyed the land as far as for agricultural use....Now, it's just a thicket....In some places the deer...can't get through [the salt cedar]; it's that matted and it's got big old thorns on it. Turkeys love it. In the winter and fall [they]...pick the hell out of them berries....Salt cedar is the one...[with] the big root system....I've seen figures [and] a big salt cedar [takes] a couple hundred gallons, a day. I think the other [concern] is their seeds and leaves [which] are really heavy in salt....Under a lot of that cover there's nothing growing because they've poisoned the soil with salt. (*Treasure County Local Civic Leader*)

III. Dealing with Erosion

A. Erosion Happens and Should/Shouldn't be Fought

Anybody that lives along the river has to have problems with bank erosion. Five years ago, there used to be one of the best cornfields in the whole area, upstream about five miles....[Then the] river took one of its classic loops way off to the other side,...[and] it went right through the middle of that cornfield. It took out 40 acres of that field and abandoned 120 acres where it had run before. And [now] if you look at that abandoned section, occasionally in high water [the river] will move through there, but there are young trees in there, and there's shrubs and bushes....So, as the river moves, it both creates and destroys, as it has always done....I happen to be a fan of wild rivers. I hate to see people lose their homes, and I have a certain amount of sympathy for a home that has been standing for 100 years,...but the river changes....I think a person should be able to protect their property, but I am absolutely opposed to new construction in the flood plain. That's an accident waiting to happen....That is eminently foolish. (*Rosebud County Local Civic Leader*)

So, when you live in an area like this, where there is no bedrock, or hard rock, if you build by the river, you're in trouble. And you will notice that the established ranches, those that have been here for 100 years or more, all of their buildings are on the highest ground. They seldom put important fields close to where the river is...[or] where they have seen the river flood. They'll leave that as tree and brush land and build their fields back....Then you look at newer construction, in the last 20 years, and people who wish to escape the city, whether it's a Montana city or a California city, or a Pennsylvania city, there's this tendency to build close to the river....We have this fascination with the 'cabin-in-the-woods.' A little fishing cabin, right by the lake or stream,...that's what we want....[But,] if it's sand or gravel, like we are here, you can build a mile back from the river and still be in danger. (*Rosebud County Local Civic Leader*)

Private properties, logically, have buildings on them. As the river washes and erodes its banks, those buildings become closer and closer to the river. Consequently, with the earth eaten away from underneath them, they tend to fall into the river. There is one specific place that I have in mind that [may] fall into the river this year. If it doesn't go this year, it will go next year. That's a given. The owners live in Pennsylvania, but DEQ is very concerned about it because the building could fall in the river and that then becomes a danger to areas on down the river. (*Treasure County Local Civic Leader*)

If [the river] takes a turn out down here by one of the farmers, that's part of God's natural way, we can't order that. Like the cut across the center of the guy's cornfield,...we can't do anything about that....If the Corps of Engineers had been here with bulldozers, we still couldn't have stopped that. (*Rosebud County Local Civic Leader*)

B. Rip-rap as a Known Solution to Erosion

I would probably go with whatever kind of natural rock application....It's the easiest....The rock is accessible here, and, from a placement standpoint, it doesn't require trying to build some kind of diversion while you do it. It's really about the only cost-effective way to do bank stabilization. (*Rosebud County Local Civic Leader*)

Allow the landowners to protect their property....[Allow them to] do whatever they can afford to do. I wouldn't say, 'Go get 35 or 40 car bodies, run a cable through them, and anchor it to the bank.' I don't like that. I've seen it done. It's not effective. (*Treasure County Local Civic Leader*)

The answer of the moment is rip-rap, and if you can get the Conservation District, the DEQ, and the Corps of Engineers to agree with you, you have some chance of applying rip-rap. Of course, we apply rip-rap entirely different than we used to. It's not chunks of rock or concrete dumped in there; we'll net it, and vegetate it, and fertilize it. If you can establish the river willows in it, you have a much better chance of saving something. It's not cheap, and everybody can't do that. (*Rosebud County Local Civic Leader*)

You know how the railroad would rip-rap theirs without permits? They'd just go back 15 or 20 feet and build a great big trench and fill it full of rock. It's on their property,...[and] above the high water mark...Someday, when the river washes away, they'll have a barricade. That is the plan, a pre-plan. It...[isn't] a bad idea. (*Treasure County Local Civic Leader*)

Erosion is very serious, and, because of the laws, it's almost impossible to protect your land....The Greater Yellowstone Coalition and some of the other environmental groups sued because...[rip-rap] was supposedly ruining the river....They didn't care about the landowner losing his property. They wanted [the river] to just go wherever it wanted, and wash their homes over. And there were some homes that...[were] damaged....It's more the agricultural land down here that's being lost. About 150 acres [were lost over] 25 to 30 years....One year you'll lose 30 acres, and the next year you might not lose any....But you still can't build rip-rap. (*Treasure County Local Civic Leader*)

[The] Army Corps of Engineers needs to get involved and shore up these banks, but they won't do it....They'll let the river run its course. But, you see, with this one particular area, when the river eats out the rest of that field, there's not much until the railroad tracks, and you don't mess with BNSF. Oh, yeah, I can foresee that once the river has eaten all of that field out, BNSF will come in and they will shore that up because you can't wash out the railroad. It doesn't matter that people lose their crop ground, but don't do anything to the railroad. (*Treasure County Local Civic Leader*)

Fortunately, they've changed the rules of rip-rap. You don't get to throw your old car bodies and things like that. When you start dealing with rip-rap, that's not...[natural]. I would rather do it naturally, if we can. (*Rosebud County Local Civic Leader*)

C. Timeliness of Permitting Process is Questioned

Because of...303 permits, and people objecting to doing anything,...we can't protect [it] anymore. And we've probably lost 150 acres of land that the river has washed away. (*Treasure County Local Civic Leader*)

You don't want the troublesome fight....For example, [when] the Hysham water ditch system [needed to have some work done],...they had a tough time getting permission for that. (*Treasure County Local Civic Leader*)

There's still a lot of management issues over erosion....Landowners [with] a lot of erosion problems [talk about] getting permits to rip-rap and doing it in a way that doesn't create...[a problem for] other property across the river. It's not easy to get a permit to do much work on the riverbank....[Loosing productive ground] can impact us from a tax base because he's got a couple of irrigated fields in jeopardy. (*Rosebud County Local Civic Leader*)

The individual landowners have to take the initiative to go through the permitting process and work with the local Soil Conservation Districts to come up with a remedy and, hopefully, get the permits. (*Rosebud County Local Civic Leader*)

I got a pump that was there in 1903 or '04. So, I can do anything I want to that pump sight because it's established. [When] my son [applied for permission to put in a new pump site],...they had to cut down three trees to make the paperwork. It was a humongous pile of paperwork to put a pump site in there. (*Treasure County Local Civic Leader*)

IV. Managing for the Future: Is it Here?

A. Growth and Development are Needed

People are becoming older [and there are] more retirees. I think this would be a fair statement. We've already seen [this happen in] the community of Hysham. (*Treasure County Local Civic Leader*)

[Hysham will be] smaller than what it is...because our children see the parents working like Trojans and not making any headway. They won't stay. I've got a neighbor who has three children. One of them has gone to Bozeman [and] is making good wages [that] can't be made here. The second one, the girl, is married....She's in Helena. That's where her husband can get work. The third is in Missoula. I don't know if she's still in school or if she's working. (*Treasure County Local Civic Leader*)

As a city council member [in Forsyth], one of my concerns is to encourage different businesses that would hold our kids, where they could go to [college] and come back and have something to work for. Right now, there's nothing. (*Rosebud County Local Civic Leader*)

This historic main street [in Miles City] is pretty unique....We also have two rivers that come through town, and...very few people that seemed to be tapping into that. In other places I have lived, if you came into a town like this you would expect to see lots of people selling rafts, people renting rafts, lots of people going to the river. (*Custer County Local Civic Leader*)

They have been talking about a rail line for 50 years. It is supposed to follow the Tongue River...Burlington would operate it. I think they did some grade work in the early 1920s....We received front page billing in 1896, so we aren't holding our breath. (*Custer County Local Civic Leader*)

We have a middle school, a great school that has been empty for four years because the population has shrunk so much. The high school has...seventh to twelfth grade[s] and the elementary does first to sixth grade[s]. (*Rosebud County Local Civic Leader*)

Back in the '60s, when there was so much emphasis on installing coal plants along the Yellowstone,...I am told that the blueprint for the full utilization...would divert up to 75 percent of the river flow. This was a U of M study that I read. We are gung-ho on energy now and the focus seems to be on building power plants and shipping power by wire rather than shipping coal by train. It is important that we have sufficient water coming through the river. That would be a long-term consideration. (*Custer County Local Civic Leader*)

The school is in bad shape....When I was going to school there were 70 or 80 [students] in high school, [and it] got up to 100. And now we're at 30...[or so]. (*Treasure County Local Civic Leader*)

Right now, my major concern is the infrastructure. Like so many entities across this country, and in this state, the infrastructure, as far as the delivery of water, is very old....The lines were [last] repaired in the '40s or the '50s, or even early '60s....Forsyth has no industrial base, so the availability of funds is always a burden on the individual taxpayer, that means small business people and homeowners in this community....State statute mandates that the water system is self-supporting. So, you can't pay for it out of a gift,...[or] from the general fund. It has to create its own revenues. That didn't seem so bad when that statute was first put in place in the early '50s. But, with the rising cost of this and that, how is it going to support itself [except by] a continual rise in water rates and sewer rates? That really frosts me. It just does. I think government has certain responsibilities, and to me that would be one: provide basic services to the public. (*Rosebud County Local Civic Leader*)

This growth policy sets up a two-mile radius outside the city limits. We have a building inspector within the city limits who has jurisdiction over any new homes, and monitors the flood zone, and makes sure everything complies with Army Corps, and all that. Outside the city limits, that inspector has zero jurisdiction. There is no county inspector....What you have is real haphazard. You have residential structures going up in potential commercial zones. When I look at what has happened between Billings and Red Lodge, and you look at all of the ranchette places, I can now see how that happened. These areas of limbo that were exploited by people that wanted to put things up on the cheap. I don't think the city and the county are on the same page. (*Custer County Local Civic Leader*)

There is an average of 30 trains that run through Miles City a day. There has been a lot of talk of a railroad running from the area near Decker where all the coal reserves are and bringing that online where that ties into the tracks here at the Tongue River. It [would] increase the train load to 46 per day, on average. (*Custer County Local Civic Leader*)

In ten years I expect [Forsyth] to be pretty much the way it is now. (*Rosebud County Local Civic Leader*)

B. Newcomers Needs and Desires Change the Local Context

The old-timers...are selling those sections because they're not usable....So, they sell them and laugh that some guy from California or Pennsylvania has bought this. [Then the buyer] builds this thing and only turns up during goose hunting season....Hunting has become more and more difficult for the locals who are not landowners because ranchers will lease rights to their property to an outfitter, which, from the standpoint of a rancher, is a smart thing to do....The leasing of those hunting rights is very important. Well, that [area is now] closed...and that's very irritating if you've lived in a place all your life, and you've always gone there to hunt along that river bottom. Or, if you've always gone there to fish and camp and you're very careful you don't burn the place down, you pack your garbage out, and now you can't go. You're 40-years-old, you've been going there since you were a kid, with your dad and your grandfather, and you can't go. That causes consternation. (*Rosebud County Local Civic Leader*)

When you come here, you actually see cowboys coming into town from the ranch. You're not seeing somebody from New York that's got a hat and a pair of boots....The part that bothers me a lot is the fact that we have these people coming in from out-of-state, with big money, buying big ranches and shutting them off. They don't want anybody to hunt on them. They're taking them out of Ag production, and [the ranch] is just a tax write-off and a place to bring their buddies hunting, but they won't let the locals hunt....One guy bought six ranches around here. They're all big ranches, and it just absolutely makes me sick. It's very difficult, now, for the family ranch to carry on, partly because of the tax structure. You've got inheritance tax. If your ranch is very big in size, that inheritance tax will kill you. And you can plan all you want, but it seems like somehow or another it gets you....A lot of people are buying acreage along the river for recreational uses...In the past, it's almost always been irrigated farm ground, but now it's

wealthier people buying it strictly for their own hunting habitat. (*Custer County Local Civic Leader*)

I look at it as a farming community, primarily. It's changing somewhat, with different ownerships coming in, and...a lot of recreation, plenty of hunters....Fishing, boating, relaxing, camping. I've talked to people camping, and they've said they like how peaceful and quiet it is. The pelicans, and the geese, and ducks, and just wildlife, everything, all around the river, is wild. (*Treasure County Local Civic Leader*)

There's quite a bit of money spent by hunters in town here. You always see them in town at noon. They stay overnight at the motels, they stop in at the Friendly Corner, down here and buy stuff. Quite a bit of money gets spent here because of them. (*Treasure County Local Civic Leader*)

[A group of buyers] never even thought when they bought 20 acres [of riverfront land] that they needed to get easement from the [adjoining landowner to cross them]. (*Rosebud County Local Civic Leader*)

People [are] moving to Eastern Montana and subdividing large pieces of property. People from the west, California, want to move to an area like [Kalispell]. The housing market in this town is so high because people have sold their house in Kalispell and come here because they want to go to a smaller community....More and more people are flocking to Eastern Montana. (*Rosebud County Local Civic Leader*)

Someone told me they sold 20 acres and a house to some airline pilot....It doesn't matter where he lives. So, they think they can live here and commute, and we're going to see that more....It's going to drive up the cost of real estate along the river. It's already [increased] ten-fold in the last few years, but it's going to get even more so....The Missouri is ahead of us....Go down to Mandan, [or] Bismarck, North Dakota, and see the development that's...[gone] on with expensive homes along the river. It's going to be a while before we see that, but we're going to start seeing people that want to build homes on that riverfront property eventually. It won't happen right away because of the dike and the Army Corps of Engineers, but once you get outside of that, people are going to watch for those parcels to open up. (*Rosebud County Local Civic Leader*)

In the summer time we don't have trouble with [people getting on private land]. It's in the fall...[that it's a problem]. They come down the river and just go up on your place. And sometimes we hear our cows...bawling and we go over there and look, and there'll be a couple of guys walking through there...telling *us* to get out of there. (*Treasure County Local Civic Leader*)

C. Recreational and Environmental Interests as Threats to Agriculture and Development

We have seen that on Fort Peck. Recreationists are making a lot of noise, but the reality is that reservoir wasn't put in for recreation. It was put in for barge traffic and power. Now

we have people lobbying so that the water stays at such a level that they can recreate. Another example,...is a group of people that want to drain the reservoir to mimic spring runoff, to maintain the fisheries below the reservoir. We haven't seen those issues on the Yellowstone, but the reality is we would be foolish to think it won't happen. (*Custer County Local Civic Leader*)

Priorities have been lopsided towards the environmentalists and communities have not been considered....I think [the] conservationists,...[who] are already doing things as far as the land [goes],...get penalized and shut out because it doesn't quite suit some environmentalists...[who] don't have a clue what it's like out here. (*Custer County Local Civic Leader*)

A lot of people from this area see the river as a recreational resource....Sometimes that can take precedence over a real good logical use of the river. (*Custer County Local Civic Leader*)

D. Pollution in the River(s)

I know how much fertilizer, and I know how much herbicide, and I know how much insecticide is put on the sugar beets....You fertilize your field, and then you flood irrigate it....It doesn't disappear, it ends back up in the drainage, and it all ends up back in the river....There's no question about it. [For] most of the rivers in this country, the nitrogen rates are far higher than they should be. (*Rosebud County Local Civic Leader*)

If you have your little house on the river, and your neighbor has a little house on the river, and then another neighbor [has a house]—that's a lot of septic systems....It can be clean looking, but that's a lot of nitrates. So you concentrate those riverside homes in that groundwater area, and then you have an issue of nitrate in the river, which is not good for aquatic life. (*Rosebud County Local Civic Leader*)

E. Questions Regarding Coalbed Methane

It's the same old thing...[It's an] economic boom....It's jobs; it's money....When we were small enough, after we messed up an area, we'd pack up our tents and move 20 miles upstream, and the [messed-up] area would recover. But we don't do that anymore, we just continually do stuff so it's harder for the area to recover....[Concerning the discharge water from coalbed methane production, if] you listen to one side, there's no problem with discharging that water, and you get all these facts and figures and that makes sense. Then you listen to the other side, and there's a horrible problem with discharging that water because of the salt and it kills everything, and they have all these facts and figures, and, 'Oh, that makes sense'....So, I don't know why that is, but that's the most contentious situation. I'm sure you're aware that Montana and Wyoming do not see eye-to-eye on such things, and we're having a fuss now on the Powder and the Tongue Rivers, because they rise in Wyoming. (*Rosebud County Local Civic Leader*)

I am concerned about that impact of coalbed methane development in the Powder River Basin. I am concerned about the reality and the perception, because if a farm....comes up for sale and the perception is that runoff from coalbed methane upstream will affect the fertility of the pastures, it diminishes the value of that [farm]. (*Custer County Local Civic Leader*)

V. Troubles: Who Will Regulate the Future?

A. The Future Looks Troublesome

We have to make sure [future generations] have access and have the opportunity to enjoy the same things that previous generations have had with the river....It's going to get tougher because demand is in its infancy. As the pressure [rises], there will be more issues. Right now, it's in the beginning stage. (*Rosebud County Local Civic Leader*)

If we don't have regulations we're going to have development right next to the river. I think development is the worse of the two evils, so we wind up accepting the regulation....[Otherwise] we can lose the cultural resource....[through] an incremental downhill slide. It's unfortunate, but this is America. That's how it works. (*Custer County Local Civic Leader*)

The next [Miles City] Mayor's Task Force is a quality-of-life task force. [The group will consider how we] can provide amenities that leverage some of our best natural assets. The trees are something that we have an abundance of, [and] we are looking at becoming a 'Tree City.' We have these rivers and the levee....These could be scenic walking, biking, and horse paths. [Right now] we have ATVs and four-wheel vehicles that are ripping around....It will be an uphill battle to ask, 'Why are you abusing this resource?' If we don't do it ourselves then I fully expect other people to come in and say, 'We built this dike and the activity is going to stop.' The city council and the mayor's office have been dominated by people that have grown up here and have a maverick spirit....[but,] if we are going to ever be attractive to people from out-of-town, we need to start treating those resources with a little more respect. (*Custer County Local Civic Leader*)

[We need a] collaborative plan that ensures varied use for all users, whether it be Ag... or homeowners, just so there was adequate planning to address all of the needs fairly for all....It's going to be a shotgun thing....The legislature will be sticking their nose in, the Soil Conservation Boards are already in,...the Fish and Game will be up against issues, and so will the local planning boards. So, it will be a multi-faceted thing. [I don't know] how a person can keep it all organized and not have every entity doing their own thing....That's the way it is right now. We have never had a collaborative meeting of any kind, with Fish and Game, with Soil Conservation, [or with] county planners. When an issue comes up, we do our part, [and] they do their part. (*Rosebud County Local Civic Leader*)

The Yellowstone is in much better shape than the Tongue as far as appropriations, but it concerns me, as we move through time, that more emphasis is placed on wildlife at the

expense of irrigation. We haven't seen huge issues yet, but they may come. And, [as for] municipalities,...the water is going to go where the votes are, ultimately, and that can be a concern. (*Custer County Local Civic Leader*)

If we get into a drought, and we did see it two or three years ago, some of these newer pumps were shut down. I am okay with that simply because...when the Conservation District adjudicated the water they put some towards in-stream flow. What concerns me is, in 20 years, [if] the legislature changes the law and all of the sudden they say we have to maintain a certain amount of flow and to heck with the guys that have 100-year-old water rights. (*Custer County Local Civic Leader*)

The only issues that come up that I know of are river access issues. There are a number of Fish and Game access points, but there are still issues from time to time with people over ownership of islands. [When] a river channel has changed....there gets to be a gray area [where] one part of the law will say an island is public, and then you've got landowners that actually have deeds to islands...[that] weren't always islands. So there...[are] those issues out there. And those usually surface during hunting season or that type of thing. (*Rosebud County Local Civic Leader*)

Recreation and agriculture aren't necessarily in conflict with each other. We irrigate and then the water comes back when the pumps are shut off. I don't see it rapidly deteriorating or disappearing. They have obviously done something right. One of the other issues is the aesthetic value. That has maintained itself quite well. (*Custer County Local Civic Leader*)

I think there is a whole bunch of old state laws that have already set [water] priorities....We [should not] change those priorities. I think they are right...now: first in time, first in right, basic water laws. (*Custer County Local Civic Leader*)

I don't like Billings and all of the box stores and the pavement. Bottomland is the most important thing for agriculture. You see all this bottomland being paved over and you know it is going to impact the river. It seems like poor design to me. (*Custer County Local Civic Leader*)

As commissioners, you are trying to promote survival of the community, which is economic development and expanding the community. That means jobs....Yes, we want the power plant and those 150 new jobs that pay well. How does that impact the farmers, the users of the resource? How does that impact the recreation? Sit down and give it serious consideration. We don't want to say, 'No, we don't want you here.' But we have to work to minimize the negative impact. As we grow the community, we are impacting that resource for recreational purposes in conflict with the Ag users. (*Custer County Local Civic Leader*)

Let's put...into this formula subdivisions and non-agriculture development. I see the hunting camps right on the rivers as possibly detrimental to downstream operators. Pump

sites will get wiped out by passing houses when the river rises. How do we manage that situation? [By] private property rights alone? (*Custer County Local Civic Leader*)

My thought would be safety....If somebody does buy a 20-acre parcel and plans on building along the river, we are going to make sure that things are in place that they can't disturb the riverbank, and all those kinds of regulatory issues....[We will be] making sure that properties are developed in a way that is not going to create a bigger problem. (*Rosebud County Local Civic Leader*)

What great industry is going to come to Forsyth? What great industry is going to come to southeast Montana? Zilch....Our children are all gone because they couldn't find work....The land is cheap. If somebody wanted to build a factory here, and make whatever, and employ 50 people, that would be a great economic boom. But it would put a tremendous strain on this city to provide services because our water plant and our sewage plant...cannot support a factory's needs. That's the catch-22. (*Rosebud County Local Civic Leader*)

I think there is a potential, looking into the future, for industrial development. Coal generation plants that use high levels of water—they will need a source and the Yellowstone is right here....The question becomes, if we do move into the future where people have to make a choice, 'How can water be used?' Right now, there aren't tough choices being made. Everyone gets what they want around here. (*Custer County Local Civic Leader*)

There are probably issues out there that are waiting to come up, [that] would be my guess. From a planning board perspective, they rarely come up [here] because so much of the river is Ag. (*Custer County Local Civic Leader*)

The farmer sells land off down in the trees because he can't use it. Should we allow [the new owners] to put houses next to the river? How do we manage that? From a planning end, yes, we have producers and their way of life that we want to protect, and yet we have development issues that are non-Ag-related....We need a broader, multi-county, approach on setbacks. The amount of setback could be determined locally, by the site condition itself. (*Custer County Local Civic Leader*)

Nature Conservancy, World Wildlife, the Audubon Society—they're not in here making a ruckus because, at the moment, there's nothing of interest. The Elk Foundation isn't going to do any work here. Ducks Unlimited and Walleyes Unlimited are very active, but not in the sense of preservation, except for those particular species. There just flat out isn't the pressure at the moment. The pressure basically stops downstream from Billings, and there just isn't the pressure. (*Rosebud County Local Civic Leader*)

Make sure [out-of-state buyers] are educated....They buy it, supposedly, because they want a piece of Montana's peace and quiet and open space, but then they want all the convenience they had in California. We see that with subdivisions. We've got a couple subdivisions where people buy site-unseen, and they come up here and wonder...[why]

the pavement [ends]...and...[why] there's no electricity to their place? They have no idea how rural Montana is. (*Rosebud County Local Civic Leader*)

B. Local Values Support Local Control

[The Yellowstone River Conservation District Council] is going, and we need to do what we can to work within the system...to address the issues. The studies have been done....I think [we need to] get our say in here, and remain vigilant through this study. (*Custer County Local Civic Leader*)

I don't think we should be putting [decisions] into the hands of the [Yellowstone River Conservation District Council] because they...[operate] on soft money, and they may not be here in five years....I think...people rely on state laws....The Council can reinforce that. (*Custer County Local Civic Leader*)

We can always use examples of strategies that have proven to be successful in an area that is not that different from the area where we live. An example is the National Main Street Program....Miles City can look at a database of communities that have made these changes, and what the challenges were, and how they overcame those challenges. [The Yellowstone River Conservation District Council] could give us some models as to how we can manage the bottomland of the Yellowstone. How do we zone the area around the river so it is preserved for the kinds of activities that are most important to us, like Ag and recreation, [with] security against flooding, and [protection for] wildlife and fishery habitat?....[We need] some set of priorities that the [local community] can then start working on incrementally. (*Custer County Local Civic Leader*)

The [Yellowstone River Conservation District Council] could help with [the following] questions: Culturally, what does it mean to live on this river? How does the river affect the design of the bridges [and] the roads that either transverse or run parallel to the river? The kinds of structures?....Recreationally, what we do, here, on the Yellowstone is different than what they do between Gardiner and Livingston. There is a great deal of attention focused on the fly fishing and...the white water in Yankee Jim Canyon. That is great. Nobody would argue that that isn't an interesting, fun recreational pursuit. On the other hand, this stretch of the river has its own feel, and how can we potentially use this river for more languid floats, raptor watching, and warm-water fishing?...It is time to share some of the enthusiasm for the river and to adjust worldviews as to what that river is. It is not just white water, it is not just trout. It is warm-water, agates, and raptor habitat. It is all beautiful. Acknowledge it and...[raise] up the self-esteem of the communities [on the lower river]. (*Custer County Local Civic Leader*)

I would hope that as we move forward there is a huge amount of local input. It can't be Custer County [only] because [we] may impact the County of Richland. I don't want Washington D.C. making those decisions. (*Custer County Local Civic Leader*)

People have concerns. You listen to the concerns and try to provide an answer. You don't make up an answer; you don't say 'I don't know,'...and you don't say 'I'll talk to the

mayor'....Most human beings...[are] not very patient critters, and so, when somebody has a concern, they want it addressed immediately. [But,] even in a small town, it takes time to get things done. The City Council only meets twice a month [and] you have a part-time mayor. (*Rosebud County Local Civic Leader*)

The growth policy [compiled by the Planning Board] is underway and due to be finished in the fall....It essentially tries to forecast growth and allow for some flexibility. The City Council's role is to become aware of responsible growth versus cancerous growth, and to direct that growth in a way that balances economic development and quality of life. Recreation would be included in that. That is where the City Council interfaces with the river. (*Custer County Local Civic Leader*)

C. Agencies Are Suspect

Federal money is channeled through Conservation Districts that are, for the most part, controlled by NRCS. That is the other real concern I have....The Council, whether we recognize it or not, may simply be a vehicle to take away local or state control and turn it over to the Federal government. (*Custer County Local Civic Leader*)

Landowners are getting extremely reluctant to allow people from the federal government to come in and inventory anything on their places....Landowners do not want more intervention on how they manage their property. As we move forward, we need to make sure that the inventory isn't used as a starting point for a change in management practices along the river. It is fine to suggest [new ways] and to tell people why it is important to do those things, but in my opinion it is not appropriate to force them to do these things....Our role is to help people understand the changes, not to dictate that they will change. I think it is appropriate to have control of things...[but] these federal mandates tend to get scary because, at the federal level, they are very gifted at the one-size-fits-all style of regulation. (*Custer County Local Civic Leader*)

There is a bunch of water that isn't adjudicated. They are holding [the rights] that nobody has laid claim to. As usage grows over time, there is liable to be more demand for the water....There is an excess of it that just blows by, but, in 20 years, it may be the people in St. Louis that will dictate how much blows by in the name of barge traffic. (*Custer County Local Civic Leader*)

D. Regulations Are Necessary, But Sometimes Late and Difficult to Accept

The question is, should there be coordination? And who's responsible for doing that? You can have a federal program, you can have a state program, you can do all that, [but] those only work if people want them to work. It has to come from the people. You cannot mandate that stuff....If this report ends up saying that there are a lot of issues and that there is no consensus, well, we already know that...There needs to be time to process and think about something and not make snap decisions. (*Rosebud County Local Civic Leader*)

You look at the flood issues in other states, and...[how they allow]development right up to the water['s] edge, is there something to be learned? Should we protect the riparian area? Should we be considering a setback as a tool?...The Red River Valley in North Dakota floods frequently and they go right back in and build again.... I hate having...[regulations], but you have to. If each county is different, how is that managing the overall river? I see a broader scope of application, either through the council [the Yellowstone River Conservation District Council] or state law, that would allow us [control and still] not get backed into the one-size-fits-all type of regulations. (*Custer County Local Civic Leader*)

One of the things that I have been working on and that I need to continue to work on is subdivision regulations. We have subdivision regulations, but thanks to the 2005 legislature, they changed some of those regulations. I need to be sure that our regulations meet legislature's dictates. (*Treasure County Local Civic Leader*)

The agriculture industry is afraid that they'll be banned from doing this, that, or the other, which might be the case if [some] groups get the upper-hand. (*Rosebud County Local Civic Leader*)

Nobody is going to do anything because, right now, there is not that pressure....You add up everybody in three counties here, and you don't come close to the population of Ravalli County....Most people, when they think they want to move to Montana, they look at the ads in magazines or on television. You're not looking at Forsyth or Miles City or Jordan....You see the Flathead Valley, you see the Bitterroots,...[and] you see the Bob Marshall Wilderness. That's what you see...and that's where the pressure is. (*Rosebud County Local Civic Leader*)

By the time you realize that [the community is changing], then you've got a mess on your hands, and that's really too late. The agriculture guys don't want land-use planning, and they don't want to be told they can't farm the flood plain because that's the best ground, that's their easiest access to water. And for years the irrigation method of choice was flood irrigation, which is the most wasteful, but it is the least expensive. It's far easier to take the water out of the ditch and run it through the...pipe and send it down the rows, than it would be to buy pivots. (*Rosebud County Local Civic Leader*)

Those land-use planning...ordinances, or flood plain ordinances, or DEQ, or whatever the ordinance may be, people forget that it's not just because somebody wants to keep you out of some place. And it's not a situation of, 'Well, I've got lots of money, so if my house is washed away, it's my loss and don't worry about it.' It doesn't have anything to do with that. It has to do with loss of life....And, if that gets washed downstream, it messes everything up, and scatters all that material in the river where it doesn't need to go. (*Rosebud County Local Civic Leader*)

The planning board could adopt some zoning regulations that would describe which land-use possibilities would be along the Yellowstone, and it's probably something that's going to need to be looked at before long. Right now, we're kind of in the mode of not a

lot of zoning because we don't want to put a lot of restrictions on the property....We're thinking about how we want to proceed, but we haven't done anything because we want to make it so it's not restrictive. (*Rosebud County Local Civic Leader*)

The people that come off the ranch, and have had a great deal of latitude in terms of what they can do on the ranch...learn first-hand the statutes that control the city zoning and planning decisions....[Some of them] go ballistic or feel some real indignity....Part of the attitude is rooted in the economic scarcity [that] people who have lived here for generations [endured]....The good times come around so seldom and [people think] 'Let's make hay while the sun shines.' (*Custer County Local Civic Leader*)

[A setback requirement] is probably something that a county can do, but, on...a river like the Yellowstone, it would almost have to be multi-county in order to be effective. I think it's the Big Hole River in Western Montana where three counties went together and established a...[500-feet] setback for roads and power lines....The three counties got together and said, 'Let's do this.' So, for the lower Yellowstone, if it was multi-county, it would be far more effective. (*Custer County Local Civic Leader*)

Rather than a flat 500-feet setback, there's usually an identifiable meander channel where the river wiggles back and forth over time. And that could be the no-build zone....[The no-build zone] would depend on the topography. We have some steep hills coming up to the river's edge, and there is no meander channel....[We could be] flexible...based on some criteria. (*Custer County Local Civic Leader*)

Powder River to Big Horn River: Recreational Interest Group Overview

Sixteen interviews were conducted with individuals who use the Yellowstone River for recreational purposes, including hunters, fishers, boaters, floaters, campers, hikers, bird watchers, rock hunters, photographers, and others who use the river for relaxation and serenity. Participants were recruited from referrals provided by members of the Resource Advisory Committee of the Yellowstone River Conservation District Council.

Participants were also identified and recruited by contacting various organizations such as Ducks Unlimited, Trout Unlimited, and the Audubon Society and by contacting local outfitting businesses.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|---|--|---|--|---|--|-------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Powder River to Big Horn River: Recreational Interest Group Analysis

I. Valuing the Yellowstone River

A. This “Isn’t a Cabela’s Fantasy”

This isn’t a Cabela’s fantasy....[We’ve] been making this three-day trip, annually, for 33 years....We build our own homemade canvas-covered boats....[and when] we poked a hole in one, we pulled over and all got to chewing gum and patched it on both sides. (*Custer County Recreationalist*)

It’s scenic in its own way. We’re kind of in the intermediate stage of the river. It’s not a free-style mountain river, but it’s not [like] Glendive where it looks like a channel. It’s kind of in the middle. It has a lot of character. It’s pretty diverse. (*Rosebud County Recreationalist*)

It’s a prairie river; there’s not much in the way of rapids. The river...can run muddy, but most of the year it is fairly clear. It has an abundance of wildlife; it’s just great. (*Custer County Recreationalist*)

It’s different every day, depending on what the weather is doing and the river is doing. In the area where I use it, it can be really clear or it can be pretty high and muddy. I used to do a lot of [catfish] fishing; I like the muddy part best. (*Treasure County Recreationalist*)

It flows through basically open country, wild country. Its beginning [is] there in the park, and then [it goes] up and down the agricultural centers of Montana. (*Rosebud County Recreationalist*)

[There is] constant change every time you go up or down the river—you look for the change. You will see gravel bars and trees that weren’t there the year before. It is like going to a different movie every time. (*Custer County Recreationalist*)

It used to be that you could throw a rock to the island. Now, you had better be a flinger. Of course, when it takes it off one bank, it puts it on the other side. It can happen in 24 hours if the river is pretty high. (*Custer County Recreationalist*)

Well, it’s a pretty big river for the way we think about rivers in Montana; it’s pretty big:...meandering, lot of vegetation, trees, brush. I think it is a pretty river. (*Rosebud County Recreationalist*)

And cormorants, and seagulls...were never here before, so it's changed. And now we have osprey moving in within the last few years; the osprey are going crazy. (*Treasure County Recreationalist*)

I would describe it as an extremely diverse ecosystem....Obviously, it flows to the land, but it's quite varied [with] lots of wildlife, lots of fishing, and just beautiful vistas, and [it's] dangerous. But, to me, [it's] welcoming water. (*Treasure County Recreationalist*)

In fall, you have the colors of the trees...like you do in town, but [by the river] they are all natural....There are trees that are 100-years-old. There are willows and wild grapes. Those are fun. (*Custer County Recreationalist*)

We have a huge waterfowl population that uses that...deer. Riparian areas support upland birds, as we discussed earlier, songbirds, raptors, [a] huge population of raptors, and provides a tremendous water fowl hunting. To alter that, or to change that in any way right now, would be a national loss, a national tragedy. (*Treasure County Recreationalist*)

There are lots of eagles. I keep a record of all the stuff that we see. I should have brought my book in. It is amazing the difference in the amount of ducks and geese you see one year to the next. (*Custer County Recreationalist*)

So, a great population of eagles out there, bird watching....You see them every year. Tons of eagles—I can't give you a number of them. Every day we'll probably see one bald eagle or even a golden eagle and those...are tremendous. (*Treasure County Recreationalist*)

On the river, this time of year [mid-June] is pleasant, but it is an unpleasant misery. Ticks—oh my God, they are atrocious. You can pick a coffee can of ticks off you. You don't want to be running around in the brush with shorts or sandals because of the poison ivy. As long as you stay on the bank where it is bare, you are fine. It will get you in the winter time too....Earlier the ticks are worse, but you don't have to put up with the bugs. (*Custer County Recreationalist*)

We're dependent on the water from the river for irrigation purposes. (*Treasure County Recreationalist*)

B. The Many Recreational Uses

I just like the river because it's about the only thing in the county you have to do. This isn't a real hot spot as far as things to do, and I think when you grow up, when you learn how to fish when you're young, and you enjoy the water,...it's part of you. (*Treasure County Recreationalist*)

It's fun to go up there and roam around the territory that Lewis and Clark actually roamed in. (*Rosebud County Recreationalist*)

It's just so peaceful, whether you are walking beside it or on it. It's beautiful. A lot of people from Western Montana would beg to differ. You just get used to it. You find beauty wherever you can out here.... You see a lot less people. So once in a while you will paddle past somebody's ranch, you can hear kids or cows bawling or something. (*Custer County Recreationalist*)

C. The River as a Refuge and "Seasonal Elixir"

It's a seasonal elixir for my obsessive compulsive disorder. I have two things that I might consider to be OCD: one is pheasant hunting and the other is river rafting. (*Treasure County Recreationalist*)

Focusing just on Treasure County, what I like about the river is that it provides a haven, a safe haven for waterfowl, which in turn provides this tremendous population base which we can harvest, and hunt, and recreate. (*Treasure County Recreationalist*)

Geese use the river as kind of a sanctuary and then they come back. (*Treasure County Recreationalist*)

I enjoy getting away. It's a good solitude, good place to go get away from telephones, sitting here all day answering phones for customers, and it's good to get out. I grew up with it. It's relaxing. You get away from the ordeals of your work. (*Treasure County Recreationalist*)

I spend a surprising amount of time just down by the river doing not much. My wife makes me pick asparagus while I'm down there. The other thing is the sense of solitude there. (*Treasure County Recreationalist*)

It's the quiet and the peacefulness of being down in that area along with the water. It's kind of a place that you can go,...relax and do the things I like to do. (*Treasure County Recreationalist*)

There's something real peaceful about being near the river, too. (*Rosebud County Recreationalist*)

D. The Free-Flowing "National Treasure"

I would like to keep the Yellowstone a free-flowing river. It is a national treasure. (*Treasure County Recreationalist*)

It's the longest free-flowing river in the United States. No dams, no water control on it whatsoever and, from that aspect, you know, that's what makes it unique. That, and the other thing that amazes people is the paddle fishing. (*Rosebud County Recreationalist*)

Without any dams on the river, it goes through a normal cycle like a river ought to, but the channel changes a lot because of that, a lot of new gravel bars come and go, and the

river channel moves and changes. I put a boat ramp in here and five years later it's sitting on a gravel bar. So, you can't blame anyone for that, it's just the way it is. (*Rosebud County Recreationalist*)

I don't think that floods should be controlled. And the reason is [because] it cleanses the river. It provides sanctuary for the birds; it is a natural process. It is almost like a flush. It cleans off the gravel. It helps the spawning [and] provides a nesting habitat for particularly the geese on these big islands because the debris and junk will come down there, so it will protect them. (*Treasure County Recreationalist*)

Whether it is up in Park County or it's all the way down to Miles City, [it] should never have a dam on it. It's free-flowing, free-stone bed stream. And it has a wild and scenic designation. In fact, I think it is the only major river in Montana...or in the United States that doesn't have some kind of a dam on it. So, in itself, that is a national treasure, as far as the river goes. (*Treasure County Recreationalist*)

E. The River's Resources

I grew up waterfowl hunting in north central North Dakota, you know, which was as good as it gets, and I put this waterfowl hunt against anything I ever seen as a kid. I mean it's great. And people...say, 'Waterfowl hunting and Eastern Montana?' [They] just don't go together. (*Rosebud County Recreationalist*)

Not only is the waterfowl doing well out there, it's done that for 25 years. But also there's the fishery, you know, where walleye and smallmouth bass....They are wonderful. That fishery is being managed by Fish, Wildlife and Parks, and it's doing good. Whether that impacts Treasure County directly, I don't know. (*Treasure County Recreationalist*)

We have excellent goose hunting here...There's a...restriction or conservation easement for waterfowl on the river from the confluence of the Big Horn to the confluence of the Tongue River, and you cannot shoot waterfowl up to the high water mark of the river. So that's good and bad. It makes for good goose hunting, because they basically have a safe haven, but most of your goose hunting is in fields adjacent to the river. Ducks are a little harder, but areas with water away from the river...can be pretty good duck hunting as well. Sometimes you wish you could actually hunt them on the river, but you know that if everybody could, the hunting would be much worse. (*Rosebud County Recreationalist*)

In the mid-'80s someone said that red squirrels showed up on the river. We had never seen one before. They are good eating....[We hunt] whitetail, usually. Mule deer if we see one. We don't see many mule deer anymore. (*Custer County Recreationalist*)

We're right at the balance, I think now, between recreation and agriculture. If we switched from one side to another, we would alienate the landowner. That would hurt the access....Then we lose generations of future hunters and we lose those dollars into the economy, whether they go buy iPods, cars, or motorcycles, instead of buying fishing

poles, and goose decoys, or something. I don't know. People will spend money. (*Treasure County Recreationalist*)

We've seen programs, like the equipment program, that encourages farmers to go to sprinkler irrigation systems and provides funding to replace flood irrigation as a more efficient means of irrigating crops. But I don't know necessarily if it's had the effects that they wanted it too. I see a lot more farmers, both on the Tongue and [on] the Yellowstone, flopping a pump in the river. There are a lot more acres that are under irrigation than were ever irrigated before. I think the overall use of that water has gone up versus being conserved. And that's at the taxpayer's expense. (*Custer County Recreationalist*)

F. Dangers

It's a very dangerous river. (*Treasure County Recreationalist*)

II. Access Dilemmas: Demands, Limits and Controls

A. Increasing Uses and Overcrowding

With more population in Billings, we're seeing more people coming down this way to use the river. (*Treasure County Recreationalist*)

We have been doing it a long time and the traffic anymore....They have big, fancy boats, jet boats....There was one that came by us last year that was as big as a school bus. I thought we were going to sink. It is not rustic anymore. They...[aren't] hunting. (*Custer County Recreationalist*)

Last year it was nice, but we saw more people than we have ever seen. (*Custer County Recreationalist*)

There's a,...I don't know the word I'm looking for,...a desire, you know, to be in touch with nature....We all have it. (*Rosebud County Recreationalist*)

B. Montana's "Sacred" Public Access Law

Someone once told me, and I am not sure this is true, that our access law is based on what Lewis and Clark did when they came up the Missouri. They mostly stayed on the high water mark, and we protected the access. That is very, very sacred. (*Treasure County Recreationalist*)

Montana has always prided itself on access. (*Treasure County Recreationalist*)

Montana is blessed. We are blessed because we have a tremendous access law....Compared to Wyoming and Colorado, this is paradise, because people can walk up and down the high water mark and not be trespassing. In Wyoming or even in Colorado,

the landowner owns the riverbed, and, theoretically, you can't drop your drift boat anchor on his property because you'd be trespassing. (*Treasure County Recreationalist*)

One more thing you can put under important items is Montana needs to maintain its stream access law. That's real critical, although there are plenty of landowners who would like to see it go away. (*Custer County Recreationalist*)

It seems like every couple of years, someone takes a run at the stream access law, and that's pretty important to our way of life....The riverbed is public property, [and] a pretty big asset to us. And, if they take that away, that would pretty much put the kibosh on most uses of the river. (*Rosebud County Recreationalist*)

I think that...having public access along the river in different places is a huge thing. I think that's important. (*Treasure County Recreationalist*)

Block Management is a wonderful program. It benefits, obviously, the hunter; it benefits the landowner, and it also benefits the game, too, because it disperses them. It's not all crowded into closed-off areas. (*Treasure County Recreationalist*)

C. Problems with Access: Abuses and "Little Kingdoms"

Sometimes big money from Denver or other places will come up and try to get the same laws that they have [in those other places] in order for the landowners to protect their little Sherwood Forests, their little kingdoms. You know what I am saying? We can't lose [our access law], we just can't. We depend upon that. (*Treasure County Recreationalist*)

And [there are] people that live in the country on 20 sections that have a place to hunt, but won't allow people to hunt because of how they've abused it or whatever reason. And I could give you examples all day long about that kind of stuff, but there is still a need there for the service that's provided by the Fish and Game or an outfitter. (*Rosebud County Recreationalist*)

In 1980, access was virtually unlimited. All I had to do was go to the door or call up and 'You bet, wherever you guys want to go, that's fine.' As we progress through a quarter century more and more hunting pressure is out there. Hunters are getting better, decoys are better, camouflage is getting better, birds are getting tougher, and access is getting tougher. (*Treasure County Recreationalist*)

What you are seeing now, not only in fly fishing but also in waterfowl hunting, our youth are not getting involved in that as much. The reason I think is twofold. One [reason] is that access is a problem. (*Treasure County Recreationalist*)

Harder access—access is much harder as it is everywhere. (*Rosebud County Recreationalist*)

I think probably access to the river [is a problem]. I know farmers and ranchers that have unauthorized people going through their place for hunting and fishing. We could probably use more access sites. (*Treasure County Recreationalist*)

[We're seeing] primarily out-of-state, big money coming in to buy their little piece of Montana and they don't want to share it with anybody. (*Custer County Recreationalist*)

They want their piece of Montana and it's theirs, I guess. Ask Ted Turner or some of those ones in the western part of the state. You know, there...[are] a lot of new landowners that have blocked access on the streams. (*Custer County Recreationalist*)

D. Privatizing "Prime" Hunting Land

We're seeing that jealousy. The rich people can go hunt on all this prime land, but the guy that lives here and drives the school bus can't get in on the property because he doesn't want to pay to do it. (*Treasure County Recreationalist*)

[Access]...is getting harder all the time. That has changed. It used to be you could go anywhere pretty much. Now places are getting bought up for the purposes of their own hunting. It is getting tough to find somewhere you can hunt. (*Custer County Recreationalist*)

We are probably fortunate in the fact that we have been doing it long enough that we know everybody that owns the land so we kind of have an out. That changes with time as some of them are being bought up solely for their own hunting. (*Custer County Recreationalist*)

Say the landowner has some really good whitetail hunting [and] wants to be able to control that, even though the deer are owned by the State of Montana....Everybody could hunt when we were younger...When people started getting better hunters and getting big deer, all the sudden, the doctor from Billings comes in, buys the rancher something during the year, gives him some gifts. It has gotten to be a money deal. (*Treasure County Recreationalist*)

I suspect that access will be harder in the next decade, as far as hunting, as far as getting permission to go, whether to go out pheasant hunting, coyote hunting, [or] deer hunting. I envision Block Management to be even a bigger thing out there. I think that is a good program. I would pay more in license fees in order to make sure that big ranches don't close off huge sections of land to the average guy. I am a big supporter of that. [Now it seems like] five or six sections are closed up by someone who has leased it to an outfitter. (*Treasure County Recreationalist*)

I've heard other people saying it is more difficult. I mean, [with the] guides getting in there, tying up areas, paying off the ranchers to keep everybody else out. I think if I lost the ranchers and farmers I know, it would be tougher to get on. (*Rosebud County Recreationalist*)

The only hindrance I can see is more guides [and] outfitters coming in. I don't see the recreation potential diminishing any. They say there's not a lot of growth out here in Eastern Montana, unless they build a power plant somewhere up on the river somewhere. (*Rosebud County Recreationalist*)

E. Decorum: Respecting Others and the Resources

It seems like the property owners adjacent to the river are excellent stewards of the land and guard that as an incredible resource. I would say from the types of things I do is that there are people who disrespect it, and do not treat it well, and should be killed or thrown in jail, or worse. (*Treasure County Recreationalist*)

[Just] like everybody, out of 100 hunters, one of them is going to do something stupid, and that's the one they remember and makes a bad name for everybody else...It's up to the rest of us to police them and to keep them in line, which we do pretty well, but people are people. Not everybody has the same value system that we do. They just don't care; they're here for months in their life and they're gone. They don't have to live with the repercussions. (*Rosebud County Recreationalist*)

Those people that just want to be turned loose on your land are the same kind of people that have the mentality that when they walk up to whatever they have harvested, an antelope or a deer, and it isn't big enough, they look around and say, 'Well there isn't anybody watching, let's get another one.' There's a problem with that kind of thinking. And I've seen it 20 times in 20 years. (*Rosebud County Recreationalist*)

You often hear that from old-timers talking about the good old days. Well, today is the good old days, too. It's just requiring you to be a little cleaner, a little tighter. We use steel shot in order to protect the birds out there....As far as the eagles, we don't want to lead up a goose, he goes to the river, and then the eagles would eat him. (*Treasure County Recreationalist*)

Let's say for example, that a fisherman is fishing a hole, and [there's me]...and my raft, or somebody else coming from the other direction upriver in a power boat or jet ski. They see the fisherman, cut it, give him a wide berth, give him as much room as you can, so it goes back to courtesy and respect, which will get you further faster than all the laws in the world. You can't legislate courtesy. (*Treasure County Recreationalist*)

The hunting on the river is vague. You are eligible to go as far as the high water mark. I have talked to umpteen officials about the high water mark and they all have different answers. (*Custer County Recreationalist*)

Now you get back to the conflict of the people, the guys that own the land along the river, and these boats and hunters. You hear stories of hunters and farmers clashing because who knows who owns the island and who owns what land, was it an island two years ago and now [what] is it this year. That type of thing has been a problem. (*Treasure County Recreationalist*)

There is a guy that is on the south side,...the section marker is on the north side and the guy that has possession on the other side paints all of the trees. The guy on the other side told me I could hunt there. It is too much hassle to fight it. You just make everyone mad if you do that. (*Custer County Recreationalist*)

I've seen more orange paint. That increases every year probably. It indicates 'No hunting', or 'No hunting without permission.' It's just a way for landowners to mark their lands to tell you to stay off or to come ask. You don't know one way or the other until you go ask. (*Custer County Recreationalist*)

I would like to see the state or an appropriate entity, typically the state, develop more fishing accesses, because it gives the public a clear authorized way to get to the river, which keeps them off of private land that they're not supposed to be on. So, the more access that's given, the more chance they have of using it and respecting private property rights and landowners. (*Treasure County Recreationalist*)

People just don't care....All the way down to micro-trash, which can be flip tops, twist ties [or] cigarette butts. Just pick it all up. And, most of the people I go with, if there's something that has been discarded, they'll pick it up. (*Treasure County Recreationalist*)

Having respect for the riparian areas....I think most landowners do respect it and do a great job. (*Treasure County Recreationalist*)

Common sense ain't too common. (*Rosebud County Recreationalist*)

III. Shifting Scenery: Development Along the Riverbanks

A. Homes on the Riverbank/Flood Plain

I hate to see the river banks over-developed by many ranchettes and farms and that sort of thing, because that has a large impact on the slightest amount of habitat. So, I think that, in terms of management, if you want to talk about some statewide zoning, maybe there needs to be a river corridor or a subdivision that is managed. (*Custer County Recreationalist*)

Encroachment of people into the river valleys, you know....That's where I think, maybe, you're getting more of the demand for people to stabilize those river banks because, of course, you've just bought your 100 acres or 50 acres and the river runs through it and you don't want to see it washed down to Billings. (*Custer County Recreationalist*)

It's not overrun so much that it isn't wild anymore. If it comes to...[that] point,...[they'll] regulate who and how many can be on it. (*Custer County Recreationalist*)

Decisions would have to be local, but it's going to be tough for a community—for Treasure County or Prairie County—to come to some sort of a regulation. I can see the Council coming up with a template, 'Here is a riparian management scheme regarding

development'....Then the county can take it...[and] rebuild it to what their needs are....In Prairie County, they may have concerns about putting feedlots down in a flood plain....That may not be a problem in Sweet Grass County [where] they're worried about houses....[We need some] kind of a template on developing things that will impact that zone. (*Custer County Recreationalist*)

When you get a lot of people on there, they have septic tanks and different things that they all manage their private 20 acres for....One guy might prefer a nice green grass lawn down to the water's edge and another person might just want it natural....So, that needs to be managed. (*Custer County Recreationalist*)

Either to protect their interests or how they want the river to be, [some people] need to get involved and recognize the more development that occurs on the river, the more impact we're going to feel....From the perspective of living here in Miles City [ask] 'How is that going to impact us?' With unbridled development, you could have a situation where the problems are prevented from occurring upstream, only to be exacerbated downstream. So, that's where we would have to take a look [and ask] 'Are we sufficiently protected with the dike system we have here or are the neighbors here going to suffer because we are sending some of our problems downstream too?' (*Custer County Recreationalist*)

I could take you up the river and show you a foundation where a person built a house next to the river. Because of a bad thunderhead and a cloud burst, he had to get a boat to get out of the house. I mean,...it came right to the foundation. It didn't take him long to move that house, and that same house is on top of a hill in Forsyth because he didn't want to be next to the river. (*Rosebud County Recreationalist*)

I think we're going to see more and more of those small acreage pieces—people who bought their piece of heaven. Maybe not so much down there to build a house on, but bought it for recreation purposes and maybe pull their camper down there. (*Treasure County Recreationalist*)

I see a lot of people that are moving to live next to the river because of the prestige, or pristine beauty of it. [They are] making the rules when they don't understand what an ice jam can do, what a spring flood can do, or [anything about] the Big Horn Dam dump. And they're going to...[need to ask] those people [who've lived there longer] why they can't do that. There is no historical knowledge to promote common sense. And it's going to cause some problems. (*Rosebud County Recreationalist*)

When that fire went up in Red Lodge six, eight, ten years ago, every one of those people was losing their house, yet *their's* was the most important....Firefighters were shipped in from who-knows-where....[People were saying,] 'You've got to protect *that* house'....Nobody had any control over it except for the person that went and built the house there in the first place. (*Rosebud County Recreationalist*)

People are plumb content with not knowing....[They don't want to know the hazards.]
(*Rosebud County Recreationalist*)

B. The “Wonderful” Cottonwoods

Those cottonwoods will grow three to four feet in a year on those gravel bars. (*Custer County Recreationalist*)

I have seen farmers take a wonderful, old...stand of cottonwood [and bull]doze them right into the river, so they can farm right up to the riverbank. That's something that I understand what they are doing, trying to increase their farmable acreage. But what are they really doing? Those cottonwoods are there probably helping that farmer more than what he realized. (*Custer County Recreationalist*)

The other thing you see is the removal of the cottonwoods replaced with farm drills. Anytime you take out the woody vegetation and replace it with...whatever, alfalfa, or wheat, or crops, you're putting those lands at risk. You know, especially the willows along the stream bank. (*Custer County Recreationalist*)

Mother Nature does some erosion control by putting some trees in the water, bushes and...things like that. We have seen a decline in cottonwood trees in our area. I think that's from chemicals and stuff in fields. Those cottonwood trees don't grow, so that takes away some of your growth and therefore erodes some of it....You just don't see many cottonwood trees around here anymore. (*Treasure County Recreationalist*)

It tends to cut, even in places where you think the bank should be stable. We have some huge cottonwood trees that went down this year. You'd think those trees would hold that bank, but they don't. (*Treasure County Recreationalist*)

C. Inadequate Weed Management

The weed problem: We're getting a tremendous invasion of Russian olive, salt cedar, there's always been some leafy spurge kind of weeds there....We're getting a new invasion of salt cedar that we haven't seen before. (*Treasure County Recreationalist*)

IV. Ideas About Erosion and Rip-rap

A. Erosion is “What the River Does”

I don't know if you'd call it a problem or not. That river is very active; it moves a lot so it's always cutting banks and moving things around a lot. The ranching part, the farming part of me looks at that as, ‘OK, what's it going to take next?’ I don't particularly worry about it. I don't see it as a problem....It does what it does....I look at a cut bank here, and [know it] deposits something down there. It gives and takes. (*Treasure County Recreationalist*)

It will always try to find its natural way. (*Custer County Recreationalist*)

A lot of the erosion is natural and just ebb and flow. (*Custer County Recreationalist*)

That is [the river's] own renewal. Yeah, it does eat away at the bank, but that's the nature of that. Again, nature is the operative word; it's natural. I guess I don't see a benefit to try to control something that is that big and powerful. (*Treasure County Recreationalist*)

I prefer it not to be stabilized because I think we need that flood plain to be utilized by the river. It's there for a purpose; even though floods impact a lot of people, it has a lot of benefits too. It recharges the soil. It spreads out water so that floods aren't as severe downstream. So, the more we stabilize our banks, the more we armor them, the more intense the flooding will be downstream. So, that needs to be managed. There must be a master plan for managing bank stabilization. (*Custer County Recreationalist*)

I think it is a natural process of that river system. Islands [are] made, [and] islands disappear. I just think, [in] really high water, erosion is a natural process along that river. (*Rosebud County Recreationalist*)

I think one of the things that people are not ready to accept is that it takes a little longer to build those new areas than it takes to cut them....All [of] the sudden, there's three acres that went in the river. There's a new gravel bar down there that will gradually turn into a useful piece of land. You lose that in a week, or month, or summer; that other piece doesn't become useable for several years, but it's there. (*Treasure County Recreationalist*)

My brother-in-law that lives down there says we've lost 90 acres right here. And I compared the photos that the Conservation District Council has put together, and it compared 50 years ago to today, and we've not lost 90 acres; we've maybe lost 20 acres in one area and gained 20 or 30 or 40 in another area. It's hard to see that because what you've gained is not mature cottonwood gallery area, like what was lost. (*Treasure County Recreationalist*)

B. Rip-rap and Its Effects

The other fight is when you start talking about bank stabilization structures. It's easy to say I want to protect my little piece, and who cares what happens down river. It's not my problem. (*Treasure County Recreationalist*)

They keep saying plant trees to stop erosion and the best rip-rap they have ever had is old cars. They have been there forever and they are mashed but they are still there. (*Custer County Recreationalist*)

He did put in big pieces of broken concrete [for rip-rapping]. They bedded it in and that has helped. He got into some kind of battle with the Fish and Game over that. (*Custer County Recreationalist*)

Well, it can stabilize the bank, but you're changing the hydraulics of the stream, so you're going to get a change somewhere else. You're going to deflect it somewhere else or change the deflection somewhere else...and it's going to be hitting the bank differently someplace else. (*Custer County Recreationalist*)

When the railroad came through there, they put stuff in and rocked stuff and some of that stuff is still there. I don't think it had a detrimental effect. (*Custer County Recreationalist*)

It's a good place for fish to hide. It's good stuff. Throw in a few wing dams here or there, and we'd have some better fishing. (*Rosebud County Recreationalist*)

Leave it like it is. It has been working pretty...[well] for quite a while. I say that the old cars are the best rip-rap they ever had, if it is up against the bank. We have been looking at them so long, they aren't unsightly to us. (*Custer County Recreationalist*)

And the rip-rapping down there doesn't seem to have much of an impact, whether it is on the waterfowl or whatever. (*Treasure County Recreationalist*)

If you start channelize-ing that river...is it a free-flowing river? I don't think so anymore. And that argument could go clear up to Park County and where they have done some extensive rip-rapping in order to protect those spring creeks up there. (*Treasure County Recreationalist*)

Definitely, they should not be using old cars or junk or tires that move suddenly. [They] are dangerous and don't stay where they are put. I'd just as soon not see concrete with rebar. I'd just as soon not see concrete at all. If they need to stabilize those banks then I'd just as soon see them use some natural rock or try to establish vegetation to do that. With a river like the Yellowstone, you're never going to get vegetation to hold the Yellowstone back anyway. But, if they really, really have to do it, I'd say hard, natural stone is the best way to go. (*Custer County Recreationalist*)

I kind of like the idea instead of armoring the banks, use barbs or jetties to try to move the velocity of the stream...you got to take into account the nature of the force you are dealing with, the water. Some techniques are just going to be less impacting, dealing with that hydraulic force, and they are going to be more effective. (*Custer County Recreationalist*)

Landowners put rip-rap or whatever....You just cause the problem to shift somewhere else. I think if you are fortunate to own land on the Yellowstone that you ought to take what it gives you. (*Rosebud County Recreationalist*)

C. Restraint and the Possible Uses for Rip-rap

You should see the springs; they are a national treasure you have to protect. I've seen rip-rapping, maybe along a quarter mile on the Yellowstone, in order to protect the field. I

don't know if that is right. Personally, I think that is wrong, but in order to protect the springs, I think that is probably the right thing to do....If the Firehole River was threatening Old Faithful would they rip-rap it? (*Treasure County Recreationalist*)

But it's like they're taxing people that live along the river...because they happen to make their living there....I'm not saying...there doesn't have to be some regulation, because there will always be that case where somebody's being 100 percent neglectful and harmful to it. But, for somebody to just do something like put a barb in to preserve what he has,...I don't think you ought to begrudge that or make that system as tough as it is. (*Rosebud County Recreationalist*)

Rip-rapping is highly controversial because agriculture is such a big part of Montana. If a rancher loses a huge hay field, that's irreplaceable to him; he's out of business. If he's out of business, then Montana doesn't get that. The Yellowstone River is a free-flowing stream that brings huge amounts of recreational dollars to Montana. Fly fishermen come from all over the world to fish this river. So, what is right, what is wrong? I think that the rip-rapping should only be in areas that would protect the spring creeks and the rest should not exist, unless it is a highway or a bridge, or something that we need to protect them for public safety and access....You see, [there are]...tons and tons of rocks dumped in there, forcing the river off to another direction. And some rip-rapping will force the river [to be] somebody else's problem. They have to, in turn, address that problem....We don't want a Yellowstone River that is all channelized all the way down to Miles City. I mean, we just don't do that. (*Treasure County Recreationalist*)

There must be a master plan for managing bank stabilization. The goal should not be to just totally armor the banks so we don't lose any soil....My goal would be to take a good, hard look to measure the benefits against the losses. Determine if it is needed. If it is simply a matter of one fellow losing his real estate that might fit in the equation, but there would be some other factors involved, too, you know. Because if you are going to lose it on one side, you're picking up on the other. If one guy loses, the other gets it, so it kind of balances out. So, you measure that against what is to really be gained....You need everybody's input and their perspective on how it is they think that should be managed because there may be some unique variables that they're familiar with that everybody else doesn't have to deal with. (*Custer County Recreationalist*)

I guess you have to divide up the impacts to that river from the most serious to the least...and the most serious potential impacts, [like] pollution, would be tops on the list, I would guess. [Those] should be regulated, and then it would move down the ladder from there to the voluntary practice. So, I'd say pollution at the top of the regulatory scale, and at the beginning of the voluntary level. Yeah, there should be a river rider. You know, it would be nice. (*Custer County Recreationalist*)

D. Rip-rap Does Not Work

Some of the fields we hunted were flooded, and actually, crop-wise, destroyed. It went over the rip-rap and flooded their fields. (*Treasure County Recreationalist*)

I don't think they are going to be able to say, 'I am going to keep this point where it is.' [Not with] rip-rap or whatever....They may stabilize it there, but they will move it somewhere else. (*Custer County Recreationalist*)

It used to be rip-rapped down there, but the river got behind the rip-rap, and that's what's happening. There used to be a Burlington Northern pumping station down there, and the river was all rip-rapped. They abandoned their water pumping plant. The water cut in behind the rip-rap and it's chewed up acres and acres of land. It's come in 300 or 400 feet into the bank and it's still chewing. (*Treasure County Recreationalist*)

This is a coldhearted thing. You bought...[land] next to the river, and stuff happens.....It is kind of cold, but,...dependent, on how they were looking when they bought it, [they were as likely to] gain some acres as they were to lose some. The idea of putting in rip-rap, or doing a lot of monkeying around in the river, I don't think it's a good idea. You can save that small piece of acreage, but when you start pushing that current around somebody else is going to be effected by that, and you don't know who downstream is going to lose their piece of heaven that they bought. (*Treasure County Recreationalist*)

E. "Money Talks" with Bank Stabilization Projects

It's a shame, because money talks...and with a local board you get that good old boy syndrome. It...[isn't] what you know, but who you know....The board's project is more important than the guy down the road that had his paperwork in a day later. And that's the biggest problem....[We] have to take the money aspect out of it [or] regulation won't work....Unfortunately, we're in a world where money rules. (*Rosebud County Recreationalist*)

F. Other Bank Stabilization Practices

I've tried to convince those guys to stay off of those [river banks] in the summer with livestock. What will build those bars is willows that come, but if you have cows on them all summer, then they won't. (*Treasure County Recreationalist*)

Higher up the river, I see more of the weirs...a little more subtle stuff. But there is a tendency to dump rock in the river,...[and my objection] depends on what it is. If it's natural stone—not really. If it's concrete, it doesn't look nice, and [the] goofballs who leave the rebar sticking out of it aren't too nice. (*Treasure County Recreationalist*)

V. Sympathies and Concerns

A. Agriculture: It Ain't for Sissies

Agriculture: it ain't for sissies....We're talking again about guys that are making a living off the land. They are not, for the most part, wanting to harm what they have going. (*Rosebud County Recreationalist*)

When we lease the property, we do it for a couple of reasons. One: for ourselves [and] to secure a place where we always have a place to go to hunt. And our second reason is that...the rancher we know is having hard times right now with the fuel [and]...the cattle prices [are] fluctuating back and forth. (*Treasure County Recreationalist*)

The number one priority to me,...when you boil it down,...has to be agriculture. That's who puts the food on the table. When we start impacting their ability to produce and keep food on the table—they have to be our first priority. Whatever fix comes down the road needs to be shared by everyone, and probably come from tax dollars because everyone benefits from what they produce. And if there's some practices that can be identified they can institute right away that aren't going to hobble them up too bad, well, let's do it. (*Custer County Recreationalist*)

The biggest concern is not that there won't be any recreation. The biggest concern is there won't be any agriculture. All your eggs and vegetables and produce and meat...[will]come from Brazil or Australia where...they're light years behind this country as far as inspection and chemicals....I mean, there's big chemical companies...selling chemicals that have been outlawed in this country for years to those people, and now they want to sell us the food. I mean, we're back to second grade math. (*Rosebud County Recreationalist*)

To Montana, we need the agriculture. That's what we are up here. We don't ever want to lose that heritage. And they can co-exist. (*Treasure County Recreationalist*)

The people that are making a living up there, trying to keep their family farms and ranches going—they should have priority. They were here first, living a unique lifestyle that seems to be slowly dying. (*Rosebud County Recreationalist*)

The Ag culture, for the area, I think is waning, even though the majority of the land use is agriculture. The idea that whatever farmers want to do they can do is probably waning. (*Treasure County Recreationalist*)

If you don't make a living, you're had. So if the regulation infringes on making a living, then I don't necessarily agree with it. (*Rosebud County Recreationalist*)

They go hand in hand....I say it's 50-50. I do. Agriculture needs it as much as we need it. It's not a position of 'them' versus 'us.' My interest is recreational, but I also want agriculture to do well because them doing well allows me to recreate....We just don't want any battle. It would be so unnecessary. It's worked before; we can work together. It's good for everybody. (*Treasure County Recreationalist*)

B. The River Corridor

To me, the river corridor is almost in three pieces. You have the river itself. You have the immediate riparian area that is river-influenced. And then you have the cottonwood corridors that are turning quickly to Russian olive corridors, some wetlands associated

with the river, that kind of thing. It's a relatively narrow strip in most places. And then you have irrigated fields that are directly adjacent to that riparian area. That boundary is flexible depending on who wants to do some modification of the area. I think that corridor has to include the Ag areas that are immediately adjacent to the riparian areas because there is so much influence to the wildlife and how the river operates based on those fields too. The deer, for example, living in those riparian areas use the heck out of the Ag fields and depend on them. (*Treasure County Recreationalist*)

I would think it would be similar to, like, a highway and you know you have a traffic way. And the traffic way is between the fences on the road. It's between fence-to-fence. It is the corridor for the public to use that way....I would think a corridor is probably the whole Yellowstone valley. You know, as it flows out of Yellowstone Park and comes down to Sidney, all the way down there, to its convergence with the Missouri, that's the corridor of that river. It's the valley. (*Treasure County Recreationalist*)

Well, if you're going to say corridor, you're going to have to define the boundaries. Is it a one-half mile or a mile either side of the center line of the river? [Will] that distance be consistent or will it depend on whether you're on public or private land? (*Custer County Recreationalist*)

The water, I mean, it has to have riparian vegetation, the type of vegetation that you associate with the different riparian zones. (*Custer County Recreationalist*)

Grazing is the one big management concern. If you overgraze it, you're taking out the important riparian vegetation, and livestock are breaking down the stream banks. Yes, that's a very common problem....It'd be nice to have better livestock management along the river so you can return the riverbank back to its real riparian-type setting. (*Custer County Recreationalist*)

Designating a river corridor and keeping in that corridor? So, the minute it starts to wander out of that corridor, they fix it. Is that what you mean? Maybe environmentally speaking they set up this corridor and nobody can touch it—it's off limits to any industry. Is that what they mean? So they can maintain it as a wild river? (*Treasure County Recreationalist*)

The riparian area is what I would call the difference between, let's say the low water mark and the high water mark, and places where there is a transition between the land and the river itself. And that can be marshy areas that hold an incredible amount of wildlife. It's all unique plant life, and that sort of thing. Those types of areas, let's say a marsh area, for example, I know there's laws that guard against draining those areas and bothering those areas, at this point I think are largely effective. (*Treasure County Recreationalist*)

C. *Attachments*

I'm attached to, and pulled into, the kind of lifestyle that keeps me...around the river, or with agriculture. If you don't love it, you won't stay. You won't last. (*Rosebud County Recreationalist*)

It's just been a part of my life. I lived by it when I was a kid and I live by it now. My wife and I have decided we're going to stay here because we like it here beside the river. When we retire, we think we'll stay right here. (*Rosebud County Recreationalist*)

One of the treats I get to experience is I get to cross it twice a day, to and from, and I watch the river to give me indications as to what's going on in the world: river height, color of the river, etc. (*Treasure County Recreationalist*)

I used to be in farming, and it's very important for irrigation purposes. And now that I live in town, we need the river for drinking water, and sewer, and watering our lawns and gardens. It's very important to us. (*Rosebud County Recreationalist*)

I want it to just be itself. You don't have designated campgrounds....You can pull out on an island and camp. (*Custer County Recreationalist*)

D. *Guides and Outfitters*

But doesn't it help the State of Montana? My argument is that if someone who is inexperienced and does not know the river [and] doesn't know how to fly fish comes to Montana and goes onto our streams and has a mediocre time and is disappointed because of what he sees and what he does [he won't come back again]....[But] if he hires a guide and has a tremendous experience,...he comes back, year after year after year....Those client bases not only bond friendships together, but also provide a tremendous economic resource for the State of Montana. (*Treasure County Recreationalist*)

Say, if I was not a guide, and I was just an angler out there and the guides, they know where to go. They got the best spots, they know how to catch fish and that's their job, to take care of their anglers. Does it detract from my personal experience? I could say it probably does, to be honest and objective. Especially if I was having a bad day, it's easier to blame the guide for your bad experience than to maybe focus on your own skills and your own lack of skills in order to provide a quality experience. (*Treasure County Recreationalist*)

That's what I mean. It's not rich guides cutting a fat hog at the public's expense. People need help. (*Treasure County Recreationalist*)

E. *Concern: Water Quality*

My number one [priority] would be [to] keep the river natural and clean. Then it's going to take care of itself. The vegetation is going to grow. The fish are going to reproduce.

There's going to be good water for all the cities and farm ground. So I think the main issue is keeping the water in as natural a state as possible, not like a dam. A dam puts pretty clear water out because the silt is on the other side of the lake. As much as you can, keep it natural the way it is, and keep it from getting polluted. (*Treasure County Recreationalist*)

Discharges to the river need to be carefully managed, like coalbed methane, and we are working on that. (*Custer County Recreationalist*)

You might want to take a look at spill response on the railroad. The railroad parallels that river for a long ways, and if you have a train wreck, how do we get to that stuff? It's pretty isolated, rural, most of this point. How do you get to it? Is the railroad in a position to get materials on that river to sop anything that's spilled into it? Probably not. And that railroad ownership changes hands from BN Santa Fe to Montana Railways, so really, [you've] got two railroads that traverse the Yellowstone. (*Custer County Recreationalist*)

Rivers age, and as they [age]... [they change]...from a clear cold water to a slow, warm, less oxygenated [river]....But that's a slow process. (*Rosebud County Recreationalist*)

I don't think pollution is a problem. We have enough environmental boys looking after the pollution problems....A lot of the pollution, like mercury, is naturally occurring in the river. Most of it comes out of Yellowstone Park, out of the geysers and hot springs, so that's where the mercury gets into the fish....Save a fish, stop a geyser! (*Treasure County Recreationalist*)

F. Concern: Agricultural Runoff

I suspect that a lot of our fertilizers and poisons and stuff get into the river. I don't think that's good....[It comes] from agriculture, [but] not just agriculture...from our town [too]....We need to educate everybody more on all that....Everybody used to [think] more chemicals will do the job better, but that's not necessarily the case. People need to be knowledgeable about what they're putting in there....I think they're getting better, but people are still thinking a little bit more is better....It's hard to get people to understand that. (*Treasure County Recreationalist*)

I don't necessarily care [about] irrigation water coming in. It's the runoff from the field, [and it's] all silty, but that's minimal. And you realize that people are making a living...doing what they're doing, and it's not like it's a huge amount of pollution. But I'm not sure how good it is for aquatic life. (*Treasure County Recreationalist*)

Irrigation water [is] being dumped back into the river that...might be saturated with pesticides. It might have excessive fertilizer that would alter the chemistry of the water. Pesticides [are] killing the mayflies, the aquatic insects that the fish need in order to survive. It is the fertilizer supercharging the phosphates and nitrates unnaturally that chokes off, that depletes, oxygen supplies....How do you fix that? I would like to see some kind of regulation where ranchers cannot dump drain water back into the river. I

don't know how....The sprinklers help. Sprinklers are wonderful and I support that. (*Treasure County Recreationalist*)

Any time that we dump pesticides and fertilizer back into that water we have a potential of ruining our state heritage. (*Treasure County Recreationalist*)

Agriculture is important to me but, just having been on the river, one thing I have noticed with my background is that a lot of the irrigation water that is put on gravelly terraces eventually makes its way back into the river with a lot of salt in it. [This is] because there is always an interface where that gravel is sitting on top of bedrock....The river is becoming saltier from that. (*Custer County Recreationalist*)

[Those] feedlots that they put along the river—I know they've got rules and regulations on those, but those are bad. (*Treasure County Recreationalist*)

It seems like the feedlot runoff is not being regulated very well. If you look at the size of feedlots now, they are huge. You can see one on the north side of the Yellowstone, a big brown streak running right parallel to the river. I mean, where's all that runoff going to? (*Custer County Recreationalist*)

I've been to public meetings on coalbed methane....The farmers from around Glendive were commenting how salty their Yellowstone River water's become. And they are blaming it strictly on coalbed methane. I think that there's some impact...from coalbed methane, but there's some impact from agricultural practices that they don't want to fess up to....It's there. I've seen it. (*Custer County Recreationalist*)

What effects, if any, does agricultural runoff have?...I don't think it's really hurt us much. It seems like we're isolated from all that. Part of the biggest demand on the river is irrigation. (*Rosebud County Recreationalist*)

[Irrigators] are going to be forced to use more efficient uses of water. They'll be looking more at what's in the return flows, dumping...[fewer] fertilizers and pesticides back in the river from Ag use. I think that's needed. (*Treasure County Recreationalist*)

G. Concern: Management Strategies

Anytime you get something that...[needs to be regulated], it should be done by the people that are affected. (*Custer County Recreationalist*)

[It's] not a question of more government; it is a question of who is government. (*Custer County Recreationalist*)

It's not a land issue; it's a people issue. It's not a land problem; it's a people and education problem. Whether we are educating them about agriculture and what it takes to make things grow, or whether we're educating them about the river and what it does, and

what makes it so wild and pristine, or what makes it so they're drawn to it....And people are scared to death of what they don't know. (*Rosebud County Recreationalist*)

I'm more of the idea of conserving it as opposed to preserving it. [The] difference...[is] preserving it is when people don't want anything to change, so they take measures to preserve it just like it is. Conserve means that it is essentially used, but it's used with an eye toward keeping it healthy. (*Treasure County Recreationalist*)

Then you have somebody in Helena making a decision and they have never seen it. Like me telling someone how to knit something. I have never knitted anything in my life. I wouldn't know what I was talking about. I think any decisions made should be local. (*Custer County Recreationalist*)

Planning would probably need to be at the state level, [with the state] saying 'Here's what we're doing with the river.' And best management practices are fine, but there might be some required management practices that are necessary....I don't think you're going to get voluntary compliance with a lot of that stuff. (*Treasure County Recreationalist*)

I think more value needs to be put on the recreation values of the river and less on the irrigation uses. Historically, irrigation was the king, [and] whatever they wanted to do, they could do. And we still see that right now. You can't really deny guys who want to put head gates in...for irrigation purposes. (*Treasure County Recreationalist*)

In '89 the license had just switched from the Fish, Wildlife and Parks, which was a mistake, to the Department of Commerce. You know, why would you take a license that's wildlife orientated from somebody that's trying to manage wildlife, and give it to somebody who could care less about wildlife? So, it was utter chaos before everybody figured out what was going on. Then they switched it from the Department of Commerce to the Department of Labor and Industry, and now they at least look at it as an industry, and we're regulated by those people and or pay our dues to those people. (*Rosebud County Recreationalist*)

Most of...[hunting license revenue] is administration fees. Very little of it is going back to actually help the resource, to my knowledge. And they're making a mistake because a person with his license, trying to do his paperwork, trying to do everything legit,...they got all these regulations on them. And the person that...[doesn't] have a license, that's just rogue hunting, I'm not doing...[anything] about it. (*Rosebud County Recreationalist*)

A lot of the boat ramps are silted in and non-usable. So I suppose maintenance at fishing access sites is an issue. (*Custer County Recreationalist*)

It's not really clear to myself or others what the Fish and Game is doing as far as stocking fish or managing the fishery....Maybe it's the wrong perception and I just don't see what they're doing, or maybe they truly feel it's healthy the way it is....Not that it's bad. You just haven't seen anything that says 'We looked at it and here's what we think that we

can improve'....[We] just haven't seen or heard anything. It makes you wonder what they're doing, if anything. (*Rosebud County Recreationalist*)

In '76 or '77, the Fish and Game was making a big deal about trying to improve the river and hunting....I filled out numerous surveys and I still participate in the fishing law program they have. I wrote them some letters and told them that I felt [since] they were doing all this planting [of] small walleyes, bass in all these lakes in Eastern Montana, Fort Peck and Yellowtail Dam, why didn't they put some back into the river?...About ten years ago, they made a smallmouth bass plant on the Big Horn River and the same time they made a walleye plant....Right now, the smallmouth bass and the walleye fishing at certain times of the year is unbelievable....That was really important....The Fish and Game was doing things to make it a better fishery, as well as putting in the boat access ramps and so forth. To me, it's made a huge difference. (*Treasure County Recreationalist*)

These kind of comprehensive planning things, where the river uses are taken to the public to ask the kinds of questions you're asking: What should be going on here? What do you want to happen? The difficulty in doing that is getting people interested and actually voicing opinions, like any other planning. People don't care until their ox becomes gored and then they care a lot. (*Treasure County Recreationalist*)

There's a group of people that want to blame the cows and the agriculture for the decline in the sage grouse....There's an education problem about the bird. Yeah, habitat's part of it, but habitat is a small part of it. You know, you and I are a very small dot on a big picture. And if we don't look at everybody around us as a very small dot on a big picture, there's a lot of the picture that gets left out, and that happens a lot, whatever issue you want to bring out. (*Rosebud County Recreationalist*)

Ag impacts, or at least...[is] being blamed for, mortality on certain game fish species, such as sauger...down near Sidney at Intake Dam. [The dam] is blamed for killing hundreds of thousands of fish every year. (*Custer County Recreationalist*)

In low water years, they do release a little more water into the river to keep the fisheries going. I am sure that the people with the water rights need that water down there too, for irrigation purposes. (*Rosebud County Recreationalist*)

When I was a kid fishing, we caught lots of sauger, and there were many saugers, and now they're basically endangered, so you can catch one sauger. You have a five-fish limit between the walleye and sauger, and one can be a sauger. When I was fishing, that's all you caught. (*Treasure County Recreationalist*)

H. Concern: Moss

The mosses come in from when Yellowtail Dam was put in Big Horn Canyon. It probably raised the temperature of the river a little bit, so the Big Horn [River] has a tremendous moss problem. That moss gets washed down into the Yellowstone here. It

affects irrigation; it gets tied up with the moss. We didn't have that problem before the dam was put in. We still want the dam. (*Treasure County Recreationalist*)

In the last 20 years it has gotten noticeably worse. In the spring it is impossible to fish....A lot of people blame the fertilizer runoff, but I think [it's] the change in the water flow....The Big Horn River changed from a warm water discharge—now [it is] pretty cold coming out of the Dam. That has to have some effect. (*Custer County Recreationalist*)

And then we need to get the moss out and turn it into an edible salad. If they can market that with a little bit of ranch dressing and clean up the river, that would be great. (*Treasure County Recreationalist*)

When I was a kid, we didn't have any trouble with moss, but we do now. (*Rosebud County Recreationalist*)

I. Concern: Water Rights

The recreationists, I don't think own any water rights. So they're at the mercy of what comes, is what you get. (*Rosebud County Recreationalist*)

When you start talking about modifying irrigation structures for recreational uses, you have a direct tie to money and the irrigation guys are going to go nuts. You are benefiting someone that [irrigators] don't care about, and that [irrigators] don't think have any reason to be there. I think that's one of the fights. (*Treasure County Recreationalist*)

There are other diversion dams, small dams that go across the river that create barriers for people like me that don't have an easy way to get their boat out and around those things. But I'm not going to whine about it. I mean ...it was there a long time before I came here and started using the river, so I'll just deal with it. (*Custer County Recreationalist*)

J. Concern: Ice Jams and Flood

There's no common sense involved with any of this that's going on. You know, they're putting animals on the same plane as people. They're putting people that have no control over the rain any more than you and I do, no control over the ice any more than you and I do, no control over the river whatsoever, and they're putting them in a position where they're responsible. (*Rosebud County Recreationalist*)

Because somebody's living on the river, making his living off the river, you know he can't be liable for something that's out of his control. Why keep beating on them...if they're down? I don't see that, but that mentality is there. They should have done something, but they can't do anything....There's an education problem. (*Rosebud County Recreationalist*)

K. Concern: Coalbed Methane

They are monitoring coalbed methane....The State of Montana should have a real good handle on how much salt is being contributed to the Yellowstone River from coalbed methane development in Montana and Wyoming because, the Tongue is not the only river that...coalbed methane water is being dumped into. It's also the Powder River in Wyoming. (*Custer County Recreationalist*)

L. Recreation Adds to the Economy

I think recreation is very, very close to [generating the same economic inputs as] agriculture....I buy a pickup truck and a trailer. I buy thousands and thousands of dollars of decoys. I buy a lot of fuel. We buy breakfast. We [spend] lease money. We have shotguns, shells,...licenses. When I have guests coming in from all over Montana to hunt with us, we go out to dinner. (*Treasure County Recreationalist*)

Powder River to Big Horn River: Residential Interest Group Overview

Eleven interviews were conducted with property owners holding 20 acres or less of land bordering the Yellowstone River, or within 500 feet of the bank. Names were obtained through a GIS search of public land ownership records. These names were randomized within counties. Other people living very near the river and whose primary incomes are not generated by agriculture were also recruited.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|---|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Powder River to Big Horn River: Residential Interest Group Analysis

I. Rural-Residential Life

A. “Big Sky” Montana

[Here, we are] less populated, thank God....I like it here. Open, Big Sky country—that’s us. I don’t know how the western part of the state can claim that. [They have] too many mountains and trees. (*Rosebud County Residentialist*)

We’re pretty fortunate to live in Montana. I like it. Not many people. And that suits me fine. (*Treasure County Residentialist*)

[Montana is] a big state, but east of Billings doesn’t exist. Eastern Montana is ‘phppt’ when it comes to funding from the government....The mountains get everything, as far as I’m concerned, in the State of Montana....It’s like there’s nothing out here. We don’t exist. (*Rosebud County Residentialist*)

It was a great place to raise a family. I would still live here if I wasn’t farming or working. We are close to anywhere we need....I can’t imagine living in a city. (*Treasure County Residentialist*)

We originally came to Eastern Montana to get experience and then move west, but it kind of grew on us after a while. (*Rosebud County Residentialist*)

I’m a fourth generation Montanan. My great grandparents homesteaded here....Being raised here, I just love it. I go other places, and it just doesn’t feel quite right. (*Rosebud County Residentialist*)

I guess it is a beautiful part of the country. Not many people. I guess it is pretty rustic really. It is a great river...and there aren’t many people on it. It is a great place. (*Treasure County Residentialist*)

Living near the river doesn’t seem any different than living downtown, except for the fact that you’re on the outskirts of town and it’s more peaceful. (*Custer County Residentialist*)

[It’s] a small, rural town. We’re located in town, close to the river. (*Rosebud County Residentialist*)

We are kind of a community within a community where we are out away from the town. It is a wonderful place to raise children. (*Rosebud County Residentialist*)

[This town] is a very small town. If you were going by on the highway and blinked, you would miss it. It is home....It's a quiet setting. The river is close, [and] people like that. It's always been home to me, no matter where I've lived. This is home. (*Rosebud County Residentialist*)

We like it down by the river. We got all the trees and meadows where there's only cactus and rattlesnakes. (*Custer County Residentialist*)

B. Conflict is Minimal

There aren't enough people here yet [for conflict to exist.] I would imagine if we start getting a lot of people, we will get that. (*Treasure County Residentialist*)

I don't see conflict between the different groups. Like I said, a lot of the landowners are very cooperative about access. The river can be used sometimes for hunting access to the state lands. They'll get in at a boat dock and go up to...state land. [There are] not too many concerns there, as long as the hunters stay where they're supposed to stay.... I think the...recreationists have to be aware of agriculture and be respectful...and I think for the most part that is recognized. Maybe the good access helps too. The roads are all graveled and nice. You can access in any kind of weather. That probably helps. (*Rosebud County Residentialist*)

I have seen jet skis and boats. They take the boats out for fishing, or just a ride on the river....I don't think it is a problem [sharing the river]....Here, it is just a small community....Everybody knows that everybody needs it for whatever use they have. (*Rosebud County Residentialist*)

I don't think one interferes with the other that much. The only thing that really interferes with the boaters and floaters would be the diversion dam...and that's for the agriculture. I don't have a problem with that....Anybody that floats or boats knows that dam is there and avoids the dam area....I don't think that they interfere with each other....I don't think the areas overlap. The boaters and floaters and fishermen don't use up any water, so they have no effect on the agriculture. (*Rosebud County Residentialist*)

I think [everyone is] pretty compatible. (*Rosebud County Residentialist*)

C. Growth Seems Possible in Some Areas, but Not All

Will there be enough jobs that we can keep some of [the kids] home? Or do they have to go farther? We see fewer and fewer opportunities in these small communities. So, there's a migration toward Billings or larger communities. I'm not sure if we can reverse that....[We're] making sure they get a good education and...from there [they] go where they can. I hope they have the opportunity to enjoy some of the rural areas in the longer run. (*Rosebud County Residentialist*)

The whole area is getting less populated. Our school is truly downsizing....There are no jobs that pay well in this area, unless you're lucky [with] the railroads....There's agriculture jobs...but they don't pay well:\$40 or \$50 a day....When you start adding it up at the end of the week, it truly isn't [much]....Montana does not take care of its people....They cry that they don't get any tourists, but they don't do anything to welcome them to the state. They have lousy rest areas and...they shut down in the winter time....They don't do anything to promote tourism [and] then they cry that everybody else gets the tourists. I'm sorry, I'm spouting off. Montana is a beautiful state. I love Montana and there are nature's wonders all over the place, but they don't do anything to promote them, and they don't do anything to take care of them. (*Rosebud County Residentialist*)

I see it growing because of the energy in the area. There are companies coming in that deal with energy. If it grows, it's going to be because of energy. It's basically right now an agriculture town and hasn't grown a lot at all....There's always the possibility of the Tongue River railroad. They talk about power plants....Energy is becoming more and more important....At some point, it's going to come in and we're going to see the town grow. (*Custer County Residentialist*)

I would like to see it stay in agriculture. I would hate to see a bunch of houses here. (*Treasure County Residentialist*)

[Farmers'] margins are getting tighter and tighter all the time. That's because of the input costs and not getting substantially more out of the products....I think they tend to get a little bit larger...[and] a little more efficient in their operation as they cover more acres. They're adding center pivot irrigation systems...that make...better use of the water and less labor, possibly produces better in the same acres too. You can control your input a lot better of the water and fertilizer....So those are some things that will,...in the future, help the efficiency [in production]. Otherwise, we're going to see more pieces sell off and being leased back...to adapt to staying out there. (*Rosebud County Residentialist*)

[Farmland is] not being subdivided....I guess we don't see those being subdivided down a great deal....Folks are buying little places close to the river so they have access, and they have wildlife and fishing. It's not affecting agriculture too much as long as that property is still available for Ag use....A lot of it is just leased. It might be a tougher balance in the long run than there is for the recreationists and agriculture at this point. (*Rosebud County Residentialist*)

We had a fellow right down here who is a dryland farmer. He put three big sprinklers up on top, way up high, and he's got two pumps to get it there....He's raised terrific alfalfa,...no problem at all....And I'm certain it cost him a lot of money, but look, he's producing up on dryland ground....There's going to be some of these dryland places...putting water on their [farms] and they could raise anything....They'd have to file for water rights. I'm certain they would...pay by volume, I'd imagine. (*Rosebud County Residentialist*)

The whole eastern part of the state is full of energy resources....Perhaps [we'll see] more folks employed. We're running shorter on houses in town because of increased railroad traffic...related to coal mining in Wyoming....There will likely be more and more developed, as it can be developed, and still take care of the land....A little bit more [residential development,] here and other places along the river. (*Rosebud County Residentialist*)

Houses are rundown around here. But people are buying and starting to...build nicer places....This place was a complete hellhole, but we bought it and did a lot of work to it....Houses are really going up in value....The lots down here are selling. (*Custer County Residentialist*)

II. Living Near the River

A. Appreciating Play, Scenery and Wildlife

I do like to fish, and we have a river boat. I enjoy that. There is a lot of wildlife. I like to hunt. I enjoy that. As far as recreation goes, there are a lot of things to do. (*Treasure County Residentialist*)

The pelicans keep coming back and increasing....The bald eagles seem to be doing well. And we had a couple of osprey nests on the bridge over the river....I hope the people don't get overpopulated and push the animals away....[Maybe we should be] making areas along the river where nobody can go for a short ways because it's closed as a pelican relief or something. There must be a way we can give the rare animals...or endangered ones a private place to hide, [or] at least nest. (*Rosebud County Residentialist*)

We do [have a boat]. You can't live on the river and not have a boat. (*Treasure County Residentialist*)

My husband took the boys down fishing and they've been swimming down there [at the river]. A lot of people go fishing. There is a fishing site down there. We just went and walked [our] dogs. (*Rosebud County Residentialist*)

It's a big river. I guess I would call it a river that's good for fishing, but it's dirty a lot of the times, fast in the spring, but it's very pretty....I like to walk on the dike. I used to walk my dogs up there. (*Custer County Residentialist*)

We like being on the edge of town. We can walk right down to the river and do whatever you want... fishing, ... ride our four wheelers,...take the dog down to it. (*Custer County Residentialist*)

We can go down [to the river] with the kids and skip rocks or try to catch a fish. We utilize the campgrounds and areas on both sides of town. Go with people that do a little

bit of boating sometimes....The river is important to all the irrigated agriculture along the way. (*Rosebud County Residentialist*)

I like the agates, and the trees, and the wildlife, the people, and the weather isn't too bad. [It] helps keep it from getting too crowded. (*Rosebud County Residentialist*)

We irrigate out of it. The river, and out of the ditch....We've got to irrigate out of it, or else we'd be drylanders...I wouldn't want [that]. (*Treasure County Residentialist*)

It's an ideal place, really, for an irrigated place....It's sentimental to me. It's my life, really....I like the environment, and I know the environment. I know every foot of the land [and all of] the animals. (*Rosebud County Residentialist*)

B. The River as a Shared Element of Life

Balance,...keeping that relationship that allows agriculture to do well, allows opportunities for recreation and fishing....I just think the balance is important. (*Rosebud County Residentialist*)

Well, farmers use it for irrigation...The city does take their city water from the Yellowstone; they pump it in. We got a new water tank down at the park...And then that [other] tank that's on the hill, that feeds that subdivision over there, and the water comes from the river too to fill that one. (*Custer County Residentialist*)

This particular diversion dam serves 20 miles of agriculture and agriculture producers. That's important to the economy and their livelihood....I don't like hearing the talk about let's knock all the dams out of the river and let things free-flow naturally because that's best for the ecosystem....I think those [dams] serve a great purpose: this one out here for agriculture, the one up there for recreation and agriculture, and to control flooding....I think there...[are] ways to open up around diversion dams so that the ecosystem can stay in balance if that's necessary....I don't want to see agriculture get traded out for the big money, open space, open recreation. (*Rosebud County Residentialist*)

I'm not a great sportsman, [and] that part of it doesn't interest me at all. It does a lot of people, but not me....[The river is] the city's water supply. (*Treasure County Residentialist*)

[Hunters], hikers, people that watch birds [use the river]. Seems like there's a lot of people interested in the birds....Of course, farmers irrigate....Water's the lifeline in our country. And there's no better way for children to grow up than appreciating everything about a river, including everything that lives along it. (*Rosebud County Residentialist*)

A lot of people like to fish. They also like to hunt agates. There are agates in this area....[There are] people with boats. Of course, there are people coming with four-wheelers now. (*Rosebud County Residentialist*)

[There is] a lot of boating. The river has pretty good depth along here. Jet skiing,...fishing, boating, [and] irrigation. (*Custer Residentialist*)

C. Outsiders Change the Local Context

We'll continue to see more outside ownership. The folks here that want to be in agriculture need to develop long-term leases with the [new] owners....Land sells at higher prices than it will produce in cash flow. So, if you've got to pay for it with the [farm] income, that doesn't work anymore....Folks that come from out of the area, whether it's Billings, or back east, or other states,...[some are] part-time, or they're moving here and retiring....[Maybe] they first came here hunting and [then became] interested in owning some land to hunt on because it's getting harder and harder to find places to hunt. Or [they] just believe it to be a good investment....When the stock markets went lower, and they weren't doing very well with their money, there was a common thought to put it in land. [Land] will always be there. (*Rosebud County Residentialist*)

I still get to drive over the place. Those new owners said, 'Anytime you want to.' Of course, we kind of look out for it. It's a family investment, and he's not here. He's in the city. (*Rosebud County Residentialist*)

Some groups, maybe the US government,...come in and purchase the easements to ranch land. And basically they pay the rancher X amount of dollars....They'll do an appraisal before [and after] the easement...because if you go to sell the ranch and there's an easement on it, a lot of people think that devalues it....Theoretically, what they're paying for is the devaluation of the land because it's got this easement....They certainly can pass it on to their kids, but the easement stays with it....In turn, the rancher agrees to a lot of different things, depending on the easement. The ranch can't be sold for subdivision; they identify wildlife...[and] wet areas....And then they help you manage the grass and that kind of thing. We're starting to see more and more of those around....It's a big cash inflow for a ranch and maybe the only way they can afford to stay on the ranch....Some ranchers...take care of our environment, and it kind of goes hand in hand with [what] they want....They don't want to overgraze it. They don't ever want to see it subdivided. But then a lot of ranchers are like, 'Don't tell me what to do on my property.' And they would never do an easement. People are pretty hot or cold on the issue. (*Custer County Residentialist*)

I'm sure if we wanted to [sell our property] it would be worth quite a lot of money to some people,...[to] some of the outside interests, as I call them....They pay a lot of money for access to the river. It's getting tougher all the time to get access because so much of it is...leased...for hunting and whatever....If you...[have] access for half a mile of river frontage, they'd pay a lot of money. (*Treasure County Residentialist*)

People moving in, the out-of-staters—we always talk about the Californians moving to Western Montana—we want to send them home....We like rural Montana....Not that we don't have drug problems, but they have a lot more. (*Rosebud County Residentialist*)

We're getting people from out-of-state. People with a lot of land...that are financially well-off. People that guide hunters and things like that....I've seen the amount of hunters increase quite a bit, and I'm not saying that's bad or anything. It's good for the economy, [and] animals are overpopulated. It's good for the herds, too....[But,] in the old days, you used to be able to just go hunting and now it's going to cost. (*Rosebud County Residentialist*)

A lot of the older people are moving out, selling out and moving to Billings. We are getting a lot of new people out here....coming from the western part of the state....They are driving up our house prices....[They are] selling for big bucks [in Western Montana] and coming down here. And they can afford to buy it, and people around Eastern Montana can't. (*Rosebud County Residentialist*)

[Homes built by outsiders]...tend to be larger....You'll see more of those pretty nice homes, \$200 to \$500 thousand. Where the ones being built [by] locals are \$100 to \$200 thousand at the most....They're buying...and building their houses...and having access....That's hard on the local communities. A good portion of them don't have this as their local community. They come part-time, or come during hunting season, or just own it and lease it. So it takes a little bit out of the area. (*Rosebud County Residentialist*)

D. Public Access versus Private Property

Access—that is complicated....I would like to see just two accesses but...it would be better for the public to have one more....There have been times, especially during deer season, [when] they keep hounding me... to put a boat in. So far, I haven't let anybody use it except my own family. There can be hard feelings over it. It is private property so they should understand that....I am not real comfortable with [them going] right by my house....You are going to have people throwing stuff out and littering. You think they won't, but they will. (*Treasure County Residentialist*)

I think there should be places people can go, like state land and stuff. That way at least everybody can have access to the river. Might not be as private as they like, but it will keep more people from breaking the law and just sneaking onto people's places. (*Rosebud County Residentialist*)

Fish and Game controls [Block Management], and the landowner gets paid so much per person, per day. And it's trying to keep more of the acres open for the average Joe that can't afford to lay out a few thousand bucks to tie a chunk up so nobody can hunt on it for years. (*Treasure County Residentialist*)

I think the Block Management thing is a good deal....When the rancher signs up for that he's agreeing to let people hunt or whatever....There's a booklet of all the ranchers that are in the program,...[and hunters] can go to the rancher's house and sign this piece of paper...getting permission. And the rancher signs it, and it's for a certain day, and the rancher gets so much money per person, per day....That way people get to go

there....The ranchers should get something. I mean, they're the ones that invested in the land. They pay taxes on it. (*Rosebud County Residentialist*)

I guess when you're that close to the river, there's always traffic and people that want to get to the river. And you probably have more traffic than if it was not on the river. (*Treasure County Residentialist*)

As long as they ask permission, that's the main thing. The same thing is true of the river....As long as they're law abiding and ask for permission. (*Rosebud County Residentialist*)

There's quite a few campgrounds....The access is pretty good public wise, and there's plenty of landowners, too, that are very willing to let you in....I think [the amount of access is] adequate....They all seem to be pretty clean and well kept. The roads aren't too bad going into them. (*Rosebud County Residentialist*)

III. The River as a Physical Element

A. Living with the River's Force

The Yellowstone is always there. It can get low, and I mean really low, and it can get really high. I've seen it in flood stages, flooding over on the north side, way over. But, it's always there; it's always flowing. In the winter time it freezes over,...but you know it's there. It's a constant. I like that. I need that in my life. (*Rosebud County Residentialist*)

Well, it's flooded here twice when we had to move out. It came right down through here once. Another time, it came around down here...The first time was about '97 or something. And then the other time was a few years ago. (*Treasure County Residentialist*)

I think erosion is a natural thing, and that we should live with Mother Nature. I mean, the river's supposed to meander, so we'll have to live with it. (*Rosebud County Residentialist*)

On this part of the river I don't know how much you can really do. The Yellowstone is so powerful that at some point it will undo everything you can do. The ice does more damage than high water. It will freeze to the rock and move out and take the rock....We have as much damage as anyone....It is an interesting place to live. The benefits outweigh the negatives. (*Treasure County Residentialist*)

The tricky thing about the Yellowstone River is it's very swift, but very shallow in places. So even the fishermen have to have a jet boat so it...[doesn't] tear up their props. (*Custer County Residentialist*)

It backed in on me that time, but it still took a lot of riverbank...I actually gained some land from it. See, right here where we live, [and] the river came in and hit us....We gained some there....I call them islands, but they aren't. Right now, the water is going through the channels, but when the water recedes...we graze it and even drive through it....You do pay some tax on it, but it's much less than irrigated ground or grazing land....But I have gained down below, which I really appreciate, but it's just willows, trees, grazing land is all it is. (*Rosebud County Residentialist*)

We've had four or five [floods], but we haven't had any for several years. Seventy-eight was probably the worst one....It covered the whole thing. (*Treasure County Residentialist*)

You know, we had a big field here that we had beets in, until all the water came down and washed everything out of here, washed it all out [to] the corner. They've moved that road about three times already. It would wash out and they'd have to move it back. (*Treasure County Residentialist*)

The '97 flood took out the rip-rap and 500 yards of dike. I lost about seven or eight acres of irrigated ground. Ice jams are another one. It can go from a nice mild river and within about 30 minutes it will be running over the banks....When it flooded in '97 it deposited gravel over 18 acres of irrigated ground four feet thick of just gravel....We had to get the trees and debris off....[It took] two weeks....We used a tractor, a loader, a Cat, and a dozer. There were a lot of real sandy piles....We had...to spread it out or push it into a hole. It was so fluffy it was hard to get around with it....I suppose that took a week or ten days. Then we went in with a disk and disked it and chisel plowed and took our own level and leveled the land. We spent a couple of weeks at that. We spent most of the summer getting it so we could plant it the next spring....You don't realize all of the things that happen when you lose that much of a crop....I suppose [it took] ten years to [pay off the expenses]....Of course we lost seven to eight acres of ground that is totally gone. At today's prices, that is worth between \$15 and \$20 thousand. You still own it, and owe on it, and still pay taxes, but it is in the middle of the river. (*Treasure County Residentialist*)

B. Dike Protects Against Flooding (Probably)

We're actually two blocks this way from the river....We hope [the dike] will hold....That's always a concern. Our house is out of the flood plain; it's built up high....But, with the drought we've had in the last ten, 20, 30 years, it's not a real big concern. (*Custer County Residentialist*)

I don't remember a flood. I remember the river coming up when I was growing up, when I was in grade school. It came up over the road, over the dike. (*Rosebud County Residentialist*)

Yes, everything on the south side of that river has a levee....The only time it's been breached is when one of the farmers...dug through it to get water from the river, it

weakened the levee, and that's when we had our big flood year....It was in '44...when the city did get flooded,...but the levees held. (*Custer County Residentialist*)

At the very far end of River Road we had some flooding. There is what's called a flood plain, and the west end of town is part of the flood plain. But where we are, I believe, is out of the flood plain....Like I said, my mom was born here...and lived here all but two years...and she said...the river has never come this far. (*Rosebud County Residentialist*)

[Water] has been right in here, but not on the main floor. It is pretty high here. It is almost as high as the dike. (*Treasure County Residentialist*)

No, they don't [have flooding] because of the dike that's built along there. That took us out of the 100-year flood plain. (*Rosebud County Residentialist*)

We haven't had any [flooding]. This house was built later than most of the houses in the neighborhood, up on the ground, so a flood would still do damage here, maybe the basement....It would have to be a bad flood to damage this house....[It] doesn't really concern us now. There would be plenty of warning for it now....[You] insure your house and leave when they tell you it's going to flood....It's not something I am going to worry about living down here. It's the chance you take. (*Custer County Residentialist*)

[We've had]...ankle-deep water, but it didn't get in the house. We've got a slough that runs parallel to the Yellowstone River down in there, and when it floods that fills up first. You might get three to four feet of water in that, but that's a low area, it's like an old riverbed. But out on the streets and stuff, you might be walking in water ankle deep. (*Custer County Residentialist*)

[It] just flooded in the spring, into basements and stuff. One time, when the river was coming up, and the ice was breaking and was jammed, and [there was a] fear of flooding, they evacuated the people out of River Road. (*Rosebud County Residentialist*)

We see maintenance on [the dike] every few years. If there's ever a spot that isn't very strong, you see them dumping gravel over the bank....So it seems to be maintained very well. (*Rosebud County Residentialist*)

They'd have to build the dike higher. (*Treasure County Residentialist*)

I know there's people here in this town that will dispute the levee being safe because they want the federal government to come in and redo it completely....They've done surveys and different things....It is my impression that they would basically redesign the levee, make it wider and stronger. If they ever did, I was told that they would buy [land near the levee], which would be nice for me....I don't think that will ever come to be...but my thought was, 'Great, I get to sell some property to the government, somebody that's got money.' (*Custer County Residentialist*)

I hear people say...that if they do widen the dike, they will lose their land, or have to sell it....I imagine it would be a great profit....Maybe I'll go buy some. (*Custer County Residentialist*)

If it wasn't for the financial reasons, I would rather not have the dike and let [the river] do its thing....Had it never...had a dike, when the river got high, it would come and spread over the whole area... Maybe it would spread more gradually....You would have a bigger area, but not as much force...and there wouldn't be as much damage as with the dike....It would come up and flood,...and would cause a bit of damage on the bank....You would have junk, but that wouldn't be hard to clean up....If it had been let go, I am sure the channel would be wider than it is now. There would be some islands and...I don't think you would have as much debris....The high water would carry it away....It wouldn't pile up as bad. I might be wrong, but I think that is what would happen....[However], it is financially impossible [not to have the dike]. (*Treasure County Residentialist*)

The only change I would like to see in the river is a little better dike system. I don't want to give up the trees....If they had to take out the trees to make the dike better, then I would like to see them replanted....The erosion is moderate....I saw them putting some rip-rap up there this spring....Everybody complained about how it was done...[and that] they tore out the trees....Why can't you leave trees too? It can't hurt, and it's better than big chunks of cement. I didn't understand that. [The trees] were mostly dead, but still their root structure was still [there]....Don't take the root-balls out....Then, the way they built it back up, it's soft...[and] over time it will settle....[But] with all the trees gone now, when water comes up, soft ground doesn't take it too well. (*Custer County Residentialist*)

C. Flood Plain Maps are Restricting but Potentially Credible

I think many are aware of how the flood plain works....I know if they have financing. They have to address that properly. So, I don't think they're being improperly built....There's surveyors that...can do [an] elevation and determine if it's a flood plain or not....If there's any financing involved, FEMA will determine it by sending us maps to look at....It's time [to get updated maps], I think. I doubt things have changed a great deal, but they certainly have some. So we know the areas pretty well that are affected....If there's no financing involved, I imagine the contractors bring up that thought [of flood plains] when they're working with some of the folks....They can sure build on them, but they buy flood insurance. (*Rosebud County Residentialist*)

Basically, [flood insurance] means that you're giving your money away to the federal government....It depends on the value of your property, but generally speaking, [it costs] about \$300 a year. You're paying for insurance that really probably you or your children will never regain a penny from because...it doesn't really cover anything but the foundation of a house....It's a big waste of money...because you have to have your homeowner's insurance on top of it, and...the federal government always waits until the end. (*Custer County Residentialist*)

I'm concerned about people moving onto flood zones and expecting other people to pay for it [when they] get flooded. Whether it's the insurance companies, which means all of our insurance premiums go up, or whatever....I've seen more houses move near the river....Some of them are not above the flood plain, and that's their fault. If something happens, I don't think anybody should have to pay for it but them....They want to be close to the river. (*Rosebud County Residentialist*)

D. Erosion and Attempts to Control Erosion

I know that it's eating up the bank on this side....The bank has really caved in....They've tried different things, but everything they seem to suggest the Army Corps of Engineers says, 'Nope, you can't do that.' They've tried rip-rap in different areas in different ways, and the Army Corps said, 'Nope...it's not ecologically safe, or it's not economically feasible, or it wouldn't work'....I would like to see [something] because I don't want my river to go away, and I don't want my town to go away. (*Rosebud County Residentialist*)

There are places where people are driving off on the river side, and making paths on the river side....That's causing some erosion....I would like them to stop all transportation, motorized vehicles, cars, four-wheelers, motorcycles.... Four-wheelers are always up there and tearing things up....[Imagine] you're out for a nice beautiful walk...[and] it's gravel up there and somebody comes by at 30 miles per hour and blows rocks and dust in your face...I would like them to close it to only foot traffic so you can still walk your dogs....I think more people would walk up there...[and]fish maybe. (*Custer County Residentialist*)

We should have laws that limit erosion control along the banks...and it's going to have to be enforced so that everybody's treated right....It would have to be [regulated by the federal government] to...[encompass] the whole river. (*Rosebud County Residentialist*)

There are quite a few erosion problems that need to be addressed, but it's like anything else anymore. It's so expensive to try....It's a pretty uphill battle when you start bucking Mother Nature. She's pretty much going to do what she wants to do, and if you try to alter her progress, it can get very expensive. (*Treasure County Residentialist*)

Rock, big rock [and] gravel won't stay. There is not enough there. The bigger the rocks, the better. (*Treasure County Residentialist*)

[The dike] was all rip-rapped and I thought I would never have to touch that again in my lifetime. In May [the river] took it all out. Some of it has been rocked since the early 1970s. (*Treasure County Residentialist*)

A long time ago, they'd put in old cars in to reinforce it, but when it got high, it just washed them away....It was temporary. (*Treasure County Residentialist*)

I think it's pretty understood that the river is always a changing dynamic, which is a natural aspect of the river....I've seen projects completed to try to help keep it within its

channels a little bit better done with the Corps of Engineers or through the Conservation District....Barbs,...where they fill it with rock...and try to just keep it within the channel [and] from cutting real severely....[Rock is] what's used the most....It's the most readily available, and maybe the cheapest...and something more natural too. (*Rosebud County Residentialist*)

It is harder to hold the soil in the banks, here in particular. It is so sandy. On my place it would almost have to be cemented to really hold it. The cost is prohibitive to do anything. You can put in \$100,000 [worth of rip-rap] and it is not going to stay there. (*Treasure County Residentialist*)

I'm concerned about people trying to control the river by doing what they want to with the banks. I think they should [use] sturdy perennial vegetation, something that stays there instead of something that goes away....The most they should be allowed to do is have a good, sturdy riparian...vegetation....Something beneficial to everybody. (*Rosebud County Residentialist*)

As far as fisheries go, if you try to keep it in one spot for too long, it will just be a big, deep channel. I think that is bad for everything. It is bad for the fish. It is bad for the land next to it. (*Treasure County Residentialist*)

If the guy across the river has enough money to put in all kinds of rip-rap...and the next guy is just struggling to survive, all the erosion goes over to him. That's not right. Let the river be the river. Nobody's forcing anybody to live here....I think that's something people should consider when they're buying a place. Look at the way the meander is going. (*Rosebud County Residentialist*)

IV. Other Problems

A. Water Quantity

Recreation...doesn't use up water....I mean, you're using the water for play but you're not using it up....The growth in the community certainly could use more water, and I worry about agriculture, because I know...people are tending to take a lot more water than they have water rights to. It's a concern....Number one, enforce the water rights that the farmers and ranchers are using....[I know] that's their livelihood, so I'd hate to see that taken away, [yet] we have to have water to drink. (*Custer County Residentialist*)

Personally, I think if we didn't have the river, we wouldn't have the city....If you stop those two rivers, dam them up or something, this town would fold up; it has to. There's no way they could maintain it....You'd have a lot of farmers go belly up if they didn't have the water....We'd just eventually die. I guess it'd be like if...everyday you cut back on your food just a little bit; I doubt if you die of old age. You'd probably die of starvation. (*Custer County Residentialist*)

I wouldn't mind some water being diverted off into a big reservoir, so we can store water. That'd be nice...and I always thought we should try to hang onto as much water as they'll allow us to, instead of just letting it flow into the ocean, because we need it here. We live in a semi-arid desert. And sometimes the river gets so low, we're losing out on species of fish that need water to live in...[and] when the water table goes down there's certain types of trees that can't make it, too. (*Rosebud County Residentialist*)

It would be hard to proportion it....They all need it....Everybody needs the water: the farmer, the rancher, the cities.... It would change things entirely if you didn't have the river for water. (*Rosebud County Residentialist*)

There's an awful lot of water that passes us by at this point...that's long gone. But I guess something that would bother me a lot [is] that...a lot of that water goes for the navigation, probably, and some for habitat of different species. (*Treasure County Residentialist*)

B. Water Quality

I'm concerned about people dumping stuff into the river....I've heard there's still places dumping toxic chemicals. I don't know if it's true or not. That certainly shouldn't be tolerated. (*Rosebud County Residentialist*)

The water and sewer was one big issue that we got over there....If your septic tank goes bad, [the city] won't let you put in another septic tank. But they won't furnish [us] with city sewer....I just believe that...if you're living in the city, they should provide water and sewer. (*Custer County Residentialist*)

You get to some places where the river is so polluted,...[but] I don't think, as far as the Yellowstone River is concerned, that it is a major problem. Maybe it is, but I don't see that as bad as it is in some places. (*Treasure County Residentialist*)

People tend to just throw stuff in the river. It's a good way to get rid of it. I know that somehow our drinking water comes from that and, of course, the fish are in it. Probably the cleanliness of it [is a concern]....I hope it doesn't get worse....I hope it stays clean....I'd like to see a little stricter laws. (*Custer County Residentialist*)

[I want us to] continue to keep it free of chemical pollutants from manufacturing, which is a divided question, because...manufacturing...would provide better paying jobs,...but I'd rather have the clean river, and the easy living, and the small town feel. I'd like to see my river kept clean...of chemicals and pollutants. (*Rosebud County Residentialist*)

C. Yellowtail Dam

[At Yellowtail Dam] they dumped too much water at one time. It happened in '78, too. The high water had started to recede, the Big Horn [River] was just getting going good [and] they started to panic, and they thought they would have a problem. They dumped

way more than they normally do. If they had waited two days we probably wouldn't have lost all the rock and the dike....Conrad Burns was here and looked at it. He said it looked like a good place for a fishing hole now....What could I say? (*Treasure County Residentialist*)

There were a lot of issues on Yellowtail Dam, [including]...how high you let the water come up in the spring, or how low you take it. And [one] year they didn't take the water really low....We thought they let the water stay high in Yellowtail Dam so that by the end of May, the boat recreationists could get in there. Then, with a big snow pack, they let a whole bunch out really fast. [At the same time there was a] great big rainstorm in the Billings area....The combination of all that led to flooding of the agriculture places. The town was OK....If there's a lot of snow way up above, shouldn't the Yellowtail Dam be taken down a little bit more to help hold that back? On the other hand, it provides a great source of irrigation...late in the summer....So, it's a tough issue to balance....I believe...the Corps of Engineers...came down and had some town meetings afterwards, to take the heat, I guess, or to try to explain how they have to balance all these different uses. (*Rosebud County Residentialist*)

I would like to see the state or federal government share in the conservation practices because when it did flood in '97 it was partly because of poor management of Yellowtail Dam....There is no [communication] that I know of. We have tried,...mostly through the Conservation District,...but it didn't seem like we got much response....I would pay a little more attention to what is going on downstream instead of just the dam. You have to look at the whole area more than they do. (*Treasure County Residentialist*)

D. Nuisances—Wildlife, Insects and Invasive Plants

The wildlife [along the river] don't like us, the deer and whatever. (*Treasure County Residentialist*)

Mosquitoes are pretty bad everywhere. (*Custer County Residentialist*)

Problems caused by the river, you mean? Other than mosquitoes? (*Rosebud County Residentialist*)

I see new plants....from the eastern part of the United States and some from the northwest....I think people are moving from other places and bringing stuff in....I see a lot more hound's-tongue and Canadian thistle....The salt cedar has moved in pretty terrible....It sucks all the water out and brings up the salt out of the ground, which goes into their leaves and they drop the leaves each winter creating a salty ground where nothing but it can live.... It's...chasing other plants out, willows [and]...cottonwoods. (*Rosebud County Residentialist*)

There's so many large patches [of salt cedar]....You would have to [spray it] by backpack in order not to kill everything else around it. The best way to spray it is a little bit on the trunk with...[a] remedy mixed with...oil....There's a type of vegetable oil that

works just fine. The red stuff is lighter and easier to carry....You don't have to use so much. Some people take the herbicide that doesn't really work so well [and] spray the whole thing. They're killing all the little bushes of different kinds around it. So I think [we need to educate]... people how to do it...And this can also be done in the winter...with pieces of solid ice along the edges of the river. That way we wouldn't get so much dissipating into the water....It still works...[and] when it's not such a busy time. (*Rosebud County Residentialist*)

E. Safety: Debris and Undercurrents

[The Yellowstone River] is a little too dangerous for water skiing. (*Treasure County Residentialist*)

It wasn't fun raising three boys on the river....You couldn't trust them....They might get drowned....They'd go on the first ditch, and they had a tire in the trees that they'd swing [into the river]. (*Treasure County Residentialist*)

I guess we always talk about kids' safety and we haven't had any problems with kids swimming where they shouldn't. I think there's a lot of training and teaching and an indoor swimming pool helps a lot of them get lessons and understand a lot more about water. It's not necessarily a problem, but something to be aware of living close to a river. (*Rosebud County Residentialist*)

Yellowstone River Cultural Inventory—2006

Part III: Big Horn River to Laurel

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Yellowstone River Cultural Inventory--2006 Preface

The Significance of the Yellowstone River

The Yellowstone River has a long history of serving human needs. Native Americans named it the Elk River because of its importance as a hunting environment. William Clark explored much of the river in the spring of 1806 and found it teeming with beavers. By 1906, the US Bureau of Reclamation was sponsoring diversion projects that tapped the river as a source of irrigation waters. The river then enabled “twentieth-century progress” and today it supports many nearby agricultural, recreational and industrial activities, as well as many activities on the Missouri River.

Management of the shared resources of the Yellowstone River is complicated work. Federal and state interests compete with one another, and they compete with local and private endeavors. Legal rights to the water are sometimes in conflict with newly defined needs, and, by Montana law, the public is guaranteed access to the river even though 84 percent of the riverbank is privately owned.

Interestingly, in spite of the many services it provides, the Yellowstone River in 2006 remains relatively free-flowing. This fact captures the imaginations of many people who consider its free-flowing character an important link between contemporary life and the unspoiled landscapes of the Great American West. As a provider, as a symbol of progress, as a shared resource, as a management challenge, and as a symbol of our American heritage, the Yellowstone River is important.

Purpose

The Yellowstone River Cultural Inventory—2006 documents the variety and intensity of different perspectives and values held by people who share the Yellowstone River. Between May and November of 2006, a total of 313 individuals participated in the study. They represented agricultural, civic, recreational, or residential interest groups. Also, individuals from the Crow and the Northern Cheyenne tribes were included.

There are three particular goals associated with the investigation. The first goal is to document how the people of the Yellowstone River describe the physical character of the river and how they think the physical processes, such as floods and erosion, should be managed. Within this goal, efforts have been made to document participants’ views regarding the many different bank stabilization techniques employed by landowners. The second goal is to document the degree to which the riparian zone associated with the river is recognized and valued by the participants. The third goal is to document concerns regarding the management of the river’s resources. Special attention is given to the ways

in which residents from diverse geographical settings and diverse interest groups view river management and uses. The results illustrate the commonalities of thought and the complexities of concerns expressed by those who share the resources of the Yellowstone River.

Identification of Geographic Segments

The Yellowstone River is over 670 miles in length. It flows northerly from Yellowstone Lake near the center of Yellowstone National Park in Wyoming. After exiting the park, the river enters Montana and flows through Paradise Valley toward Livingston, Montana, where it turns eastward. It then follows a northeasterly path across Montana to its confluence with the Missouri River in the northwestern corner of North Dakota.

Five geographic segments along the river are delineated for purposes of organizing the inventory. These five segments capture the length of the river after it exits Yellowstone National Park and as it flows through eleven counties in Montana and one county in North Dakota. The geographic delineations are reflective of collaborations with members of the Yellowstone River Conservation District Council and members of the Technical Advisory Committee and the Resources Advisory Committee.

Working from the confluence with the Missouri River towards the west, the first geographic segment is defined as Missouri River to Powder River. This geographic segment includes some of the least populated regions of the entire United States. This segment is dominated by a broad, relatively slow-moving river that serves an expansive farming community whose interests blend with those folks living along the seventeen miles of the Yellowstone River that traverse North Dakota. Here the Yellowstone River is also important as a habitat for paddlefish and Pallid sturgeon. At the confluence with the Missouri River, the size of the channel, significant flow and substantial sediment carried by the Yellowstone River makes its importance obvious to even the most casual of observers. Prairie, Dawson and Richland Counties of Montana are included in this segment, as well as McKenzie County, North Dakota.

The second geographic segment, Powder River to Big Horn River, is delineated to include the inflows of the Big Horn and Tongue Rivers as major tributaries to the Yellowstone River and to include the characteristics of the warm-water fisheries. This segment is delineated to recognize the significant agricultural activities of the area and the historical significance of the high plains cowboy culture. This segment includes Treasure, Rosebud and Custer Counties.

The third geographic segment, Big Horn River to Laurel, essentially includes only Yellowstone County, but it is a complex area. To begin, important out-takes near Laurel divert water to irrigations projects further east. Additionally, it is the one county along the length of the river with a sizable urban population. Billings is known as a regional center for agriculture, business, healthcare and tourism. This area is notable for its loss of agricultural bottomlands to urban development. Irrigation projects are important east of Billings, especially in the communities of Shepherd, Huntley and Worden. These

communities and Laurel also serve as bedroom communities to Montana's largest city, Billings. It is in Yellowstone County that the river begins its transition to a warm-water fishery.

The fourth segment, Laurel to Springdale, ends at the northeastern edge of Park County, Montana. The river in this area is fast-moving and it supports coldwater fisheries. While there is little urban development in this segment, there are some rather obvious transformations occurring as agricultural lands near the river are being converted to home sites for retirees and vacationers. The geographic segment includes Sweet Grass, Stillwater, and Carbon Counties.

The last geographic segment is defined as Springdale to the boundary with Yellowstone National Park at Gardiner, Montana and is within the boundaries of Park County. The river leaves Yellowstone National Park and enters Montana at Gardiner. It flows in a northerly direction through Paradise Valley and is fast-moving. It supports a cold-water fishery that is well-known for its fly fishing potential. Near Livingston, Montana, the river turns easterly and broadens somewhat thus losing some of its energy. However, severe floods occurred in 1996 and 1997, and local groups have since spent many hours in public debates concerning river management.

Recruitment of Native Americans

Native Americans also have interests in the Yellowstone River. They are active in maintaining the cultural linkages between their histories and the local landscapes. For the purposes of this study a number of Native Americans from the Crow tribe and the Northern Cheyenne tribe were included. Native Americans were recruited by means of professional and personal contacts, either as referrals from state agency personnel, from Resource Advisory Committee members of the Yellowstone River Conservation District Council, or from other project participants.

Recruitment of Geographic Specific Interest Group Participants

The participants represent a volunteer sample of full-time residents of the towns and areas between the confluence of the Yellowstone and Missouri Rivers in North Dakota and the town of Gardiner, Montana at the north entrance to Yellowstone National Park. Participants were recruited from four major interest groups: agriculturalists, local civic leaders, recreationalists, and residentialists living near the river. A database of names, addresses and contact information was constructed for recruitment purposes. Nearly 800 entries were listed in the database, representing a relatively even contribution across the four major interest groups.

Individuals representing agriculture interests, including farmers and ranchers, were identified and recruited from referrals provided by the local Conservation Districts, the Yellowstone River Conservation District Council and the Montana Office of the Natural Resources Conservation Service.

Individuals holding civic leadership positions, including city mayors, city council members, county commissioners, flood plain managers, city/county planners, and public works managers, were identified and recruited through public records.

Individuals who use the Yellowstone River for recreational purposes, including hunters, fishers, boaters, floaters, campers, hikers, bird watchers, rock hunters, photographers, and others who use the river for relaxation and serenity, were identified and recruited from referrals provided by members of the Resource Advisory Committee. Participants were also identified and recruited by contacting various non-governmental organizations such as Ducks Unlimited, Trout Unlimited, the Audubon Society and by contacting local outfitting businesses.

The names of property owners holding 20 acres or less of land bordering the Yellowstone River, or within 500 feet of the bank, were obtained through a GIS search of public land ownership records. Twenty acres was used as a screening threshold to separate people who lived along the river corridor but whose incomes were from something other than agricultural practices (residentialists) from those who were predominantly farmers or ranchers (agriculturalists). The names were sorted by county and randomized.

Recruitment proceeded from the county lists. Other people living very near the river and whose primary incomes were not generated by agriculture were also recruited. These additional participants may not have had property that technically bordered the river and/or they may have owned more than 20 acres. In all cases, the recruits did not consider agricultural as their main source of income.

Participants were recruited by telephone and individual appointments were scheduled at times and meeting places convenient for them. Many interviews were conducted in the early morning hours and the late evening hours as a means of accommodating the participants' work schedules.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|--|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

A total of 313 people participated in the project, including 86 representatives from agriculture, 68 representatives in local civic roles, 76 representatives of recreational interests, 76 residentialists and seven Native Americans. A relatively equal representation was achieved in each geographic segment for each interest group.

Description of Interviews and Collection of Participant Comments

A master protocol was designed from questions provided by the US Army Corps of Engineers and approved by the Office of Management and Budget (OMB approval # 0710-0001; see example in the appendix to this volume). Questions were selected that would encourage participants to describe the local environs, their personal observations of changes in the river, their uses of the river and any concerns they may have had about the future of the river as a shared resource. Open-ended questions were used as a means of encouraging participants to speak conversationally.

The questions were adapted to the participants' interest groups. For instance, interviews with agriculturalists began with the question, "How many years have you been in operation here?" while local civic leaders were asked, "How many years have you lived in this community?" Similarly, agriculturalists were asked, "Are there any problems associated with having property this close to the river?" and local civic leaders were asked, "Are there any problems associated with having private or public properties close to the river?" The overriding objective of the approach was to engage the participants in conversations about the river, its importance and their specific concerns.

Participants were promised confidentiality, and open-ended questions were asked as a means of encouraging the residents to talk about the river, the local environs and their personal observations and concerns in their own words. All respondents were interested in talking about their perspectives, and they represented a variety of views of the river, including: farming, ranching, agricultural science, commercial development, recreation, civic infrastructure, environmental activism, historical views and entrepreneurial interests.

With only three exceptions, the interviews were audio-recorded and verbatim transcripts were produced as records of the interviews. In the other three cases, hand-written notes were taken and later typed into an electronic format. The total resulting interview data totaled approximately 2,700 pages of interview text.

Steps of Data Analysis

The content of the interview texts was distilled by way of analytical steps that would retain geographical and interest group integrity.

Segment-Specific Interest Group Analyses: Taking all audio-recordings, transcripts, and field notes as the complete data set, the research group first set out to determine the primary values and concerns for each geographic segment-specific interest group. The team began with the four interest groups from the segment Springdale to Laurel. Team

members read individual interview transcripts and determined a core set of values and concerns for the individuals represented. As a team, notes were compared and a combined outline of values and concerns was constructed for each interest group in the geographic segment. Quotes were then taken from each transcript in the set to illustrate the particular values and concerns.

Outlines of the interest group analyses for the Springdale to Laurel segment were then used as aids in constructing the interest group analyses in all other geographic segments. Care was taken to adapt the interest group analyses to highlight if, and when, the core values and concerns were different in each geographic segment. The Native American perspective was addressed as an individual analysis with attention to the specifics of those perspectives. Each of the 21 segment-specific interest group analyses was then illustrated with quotes from interviews.

21 Segment-Specific Interest Group Analyses

| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
|-------------------------------------|--|---|--|---|--|---------------------------|
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Segment-Specific Geographic Summaries: A summary of the values and concerns for each geographic segment was constructed using the sets of four geographic-specific interest group analyses. Geographic summaries were written to reflect the concerns that crossed all interests groups of the segment, either as points of agreement or disagreement, and were illustrated with quotes from the four relevant interest group analyses.

| 5 Segment-Specific Geographic Summaries | | | | | | |
|--|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
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| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

River-Length Interest Group Summaries: River-length interest group summaries were constructed for each of the four primary interest groups. For example, agricultural concerns from the five geographic segments were compared and quotes were taken from the segment-specific interest group reports to illustrate commonalities and differences. Similar reports were constructed for local civic leaders, recreationalists and residentialists.

| 4 River-Length Interest Group Summaries | | | | | | |
|--|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Organization of the Reports

Overall Summary of the Yellowstone River Cultural Inventory—2006: An overall summary of the inventory was written as a means of highlighting the values and concerns that cross interest groups and geographic segments. The segment-specific geographic summaries and the river-length interest group summaries were used as the bases for the overall summary. This report is by no means comprehensive. Rather, it is written to encourage further reading in the reports of each geographic segment and in the interest group reports.

Part I: Missouri River to Powder River: This volume includes the geographic summary for Missouri River to Powder River and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Part II: Powder River to Big Horn River: This volume includes the geographic summary for Powder River to Big Horn River and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Part III: Big Horn River to Laurel: This volume includes the geographic summary for Big Horn River to Laurel and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Part IV: Laurel to Springdale: This volume includes the geographic summary for Laurel to Springdale and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Part V: Springdale to Gardiner: This volume includes the geographic summary for Springdale to the boundary with Yellowstone National Park and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Research Team and Support Staff

The project was directed by Dr. Susan J. Gilbertz, Montana State University—Billings. She was aided in data collection and data analyses by Cristi Horton, Tarleton State University and Damon Hall, Texas A&M University. Support staff included: Amanda Skinner, Amber Gamsby, Beth Oswald, Nancy Heald, Beth Quiroz, Jolene Burdge, and John Weikel, all of Billings, Montana.

Big Horn River to Laurel: Geographic Segment Overview

Interviews in the geographic segment Big Horn River to Laurel were conducted July 7-17, 2006. A total of 66 interviews were conducted, including individuals with agricultural, civic, recreational, or residential interests as their primary concerns.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|---|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
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| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Big Horn to Laurel: Geographic Segment Summary

Bureaucracy is a tool that you can either use to your advantage or disadvantage. The fellow that [complains] probably doesn't realize the benefit he's getting from these layers of bureaucracy. (Yellowstone County Local Civic Leader)

Introduction

The study segment Big Horn to Laurel includes data from the people of one large county: Yellowstone County. Three themes dominate conversations with the four interest groups. One theme focuses on the evolving communities of Yellowstone County, most of which are influenced by the economic success and sheer growth of Billings. The second theme focuses on the evolving relationships that the people have with the river. While traditional agricultural activities continue in the county, many people discuss notions related to urban and residential experiences and how the river becomes an asset that improves one's quality of life as an urban dweller. The third theme involves a complex tangle of pressures and demands that require managerial strategies capable of dealing with a future that has arrived.

Evolving Communities are Dominated by Urban Growth

Agricultural activities are recognized as the primary transformative force in the valley. Yet, agricultural activities are seldom mentioned without references to other river-dependent activities and services:

It is a very productive area, producing excellent crops on land irrigated out of the Yellowstone River. If it wasn't for the Yellowstone River, there wouldn't be anything here but desert. *(Yellowstone County Agriculturalist)*

Because of irrigation in this valley, this valley has changed tremendously from what it was in the 1870s....This whole valley was an alkaline flat....There was a nice riparian area, because the Yellowstone is a wandering river, but it was probably a mile wide at its most. Now it is ten miles wide. *(Yellowstone County Local Civic Leader)*

[The river] is the lifeblood of the valley....It keeps a lot of farmers in water and able to grow crops and it's a good source of recreation....I have a boat that was made for river use; it's got a jet on it. And I'd rather boat any day on a river than on a lake. It's just so much more fun. It provides a lot of habitat for wildlife that is fun to watch and fun to hunt....Fish are fun to eat and catch. So it's a wonderful thing for this valley. *(Yellowstone County Residentialist)*

Some people question whether or not agricultural practices, some of which were adopted at the turn of the previous century, are adequate today:

Most of the irrigation projects in Montana were built around...1900 to 1920. They're over 100 years old and they're still operated [today as]...they were when they were built, say in 1910....They're operated very, very inefficiently. There is much more water diverted than is really needed to water the crops. That tends to dewater the river. There's much more water returned to the [river] than needed...and that water is usually laden with silt and Ag chemicals, pesticides, nutrients and so forth....And I'm not anti-agriculture at all. I mean, I don't want to come across as hypocritical at all. I eat the meat and I appreciate it. But I think there are some gross inefficiencies in operation, and that unfortunately degrades the quality of our river. (*Yellowstone County Recreationalist*)

One of the things we hope to see happen...is modernized irrigation practices....Most of the farmers are using 1,000-year old irrigation [methods]....In this hot weather, [they] put as much water on those crops as they can, and they over irrigate in spots and so it carries away silt [and] chemicals back into the river. (*Yellowstone County Recreationalist*)

Others note improved awareness of potential problems with agricultural practices and question whether or not agriculture is used as a scapegoat for larger issues:

Some of the nitrogen probably gets in the water table because it goes down pretty fast. Phosphorous hangs with the soil a while. We use the waste water again when it comes through the drains. We use the same water twice. (*Yellowstone County Agriculturalist*)

The biggest problem that I think is going to be faced on the Yellowstone is ignorance of the natural process, and bad practices. They blame everything on the farmer and rancher. Well, there aren't many left....Those guys [still farming] are getting old, and they're selling off. (*Yellowstone County Agriculturalist*)

As important as the comments regarding agricultural activities are, conversations quickly turn to the other industries and activities supported by the river, especially as they are related to the growing urban center. Billings is the largest community in Yellowstone County, and everyone realizes the town has played an important regional role for years:

[This area] has always provided jobs. My grandparents came here with the railroad. My dad met my mother and moved here from Butte....They stayed here [because of work]....With the refineries, the railroads and the medical corridor, there...[are] jobs available, and I think that is what's real distinct. (*Yellowstone County Local Civic Leader*)

We are the largest metropolitan area between Spokane, and Minneapolis, and Calgary, and Denver, and Salt Lake....Our medical corridor will continue to

grow...[because of] that whole bubble of the generations that are retiring [here]...Businesses that need transportation [locate here]...[and] retail businesses [do well because] you've got people. (*Yellowstone County Local Civic Leader*)

Outlying communities, such as Laurel, Worden and Shepherd, are becoming bedroom communities for Billings, and in some areas the agriculturalists are aware that the increasing land values are not compatible with agricultural activities:

The place right next to me sold to a doctor from Billings. He bought up the land, inflated the prices...[and now a farmer] can't buy land....The outlook hasn't been real good on farming for the last few years....The land is too expensive, and the cost is too high to try to farm. (*Yellowstone County Agriculturalist*)

The local understandings of what it means to have such vibrant, or some might say high-pitched, activities driving the evolution of the valley are of particular interest. Within these understandings, people begin to mention the many concerns they have about the demands placed on the river:

Down around Columbus, you start getting into row crops, and corn, and beets, and into a lot more expensive land—a lot more productive land....We've got to protect some of that. Urban sprawl is taking that out. (*Yellowstone County Agriculturalist*)

[The river] is huge for agriculture, but it is huge for economic development, too. We have three refineries, and...the Montana Power generation plant takes water. Nothing works around here without water. (*Yellowstone County Local Civic Leader*)

The river has to change. As Billings grows, and Laurel grows, and everything else grows, our water supply comes out of the Yellowstone River [and the river has] got to go down....[But, in terms of] habitat, it's essential that the river rise, that floods sub-irrigate [the] ground and create the nesting habitat for...ducks and geese....It has to do its natural flooding. But if we keep drawing more and more water out of it, it's going to change the natural habitat. (*Yellowstone County Recreationalist*)

The first people that should have the opportunity to use water are those that are fighting things like wildfires....Second are the municipalities, and their water systems, so the public has drinking water....Third are the farmers. You know, that's their lifeblood for...irrigation and stuff. And then you finally get down to the rest of it. (*Yellowstone County Residentialist*)

Municipal water uses are sometimes compared to agricultural uses:

[Billings takes] about 24 million gallons a day, peaking at over 50 million in the summer and down to about 15 to 16 million in the winter....We aren't even a pipsqueak compared to irrigators....We return 75 percent of it to the river [and] another 10 to 15 percent is returning to the aquifer. Ok, so we've evapotranspired 15 percent, but we've gained great things from that. (*Yellowstone County Local Civic Leader*)

[Laurel] uses a maximum of seven million gallons of water a day and our intake is designed for 20 million per day. We have good excess capacity. Informally we have talked to the City of Billings about selling them water....[Laurel has] the second water right on the [entire] Yellowstone River, so the chances of us not having water accessibility are very remote. (*Yellowstone County Local Civic Leader*)

Some assume that the capacity for growth is, or will be, limited by the availability of water and that contentious situations are sure to arise out of attempts to share this limited resource:

My elders always told me, 'Whiskey was for drinking and water was for fighting.' I think it's true....When you have the amount of people...and the amount of land that is good land, the only thing that's going to prevent that from being developed is the use of water....Right now there are opportunities for development that are being held back until you find the proper mix of how you are going to supply water....Water holds the key. (*Yellowstone County Local Civic Leader*)

You do have all the industry, too. There's an awful lot of industry that's down by the river that creates not exactly what you would call pleasing environments....Yet it is part of our culture. I guess we all have to be a little tolerant of everybody else, because we can't have everything our own way. (*Yellowstone County Recreationalist*)

If it wasn't for the Yellowstone River the City of Billings wouldn't exist. And one of the things I think that all of us ought to be concerned about is that, with the terrific growth in population that we have, water is going to become a very valuable commodity. We have lots of water, but we make very little effort, if any, to store it. (*Yellowstone County Agriculturalist*)

I think it is too bad we can't divert it somehow, the high water, and put it to use. Once it leaves this state, it is gone. I think we could develop more agriculture if we had some diversion. I'm not sure how'd you do it. Maybe it would take a dam and that would be pretty hard to do anymore. (*Yellowstone County Agriculturalist*)

Another conflict would be between power generation and wanting to use more of the water for power generation and also for cities...and agricultural diversion dams....It's not too much of an issue right now, but in ten years..., I think it might be. I think there will be conflicts of development versus leaving the river in its pristine character. (*Yellowstone County Recreationalist*)

There won't be [enough water] in 100 years. There won't be enough.
(*Yellowstone County Residentialist*)

The growth of subdivisions near the river generates a great deal of discussion because the subdivisions are obvious in the physical landscape:

All of the ground that you see between Laurel and Billings is dotted with development. Between Laurel and Park City, and Park City to Columbus, it's the same thing....I think in 30 years,...when you come off the Columbus hill, it's going to be all developed, probably to Custer. (*Yellowstone County Agriculturalist*)

If the realtors had their way, they would fill the flood plain with houses as they have in so many parts of the country. (*Yellowstone County Recreationalist*)

The way Billings is growing, the irrigated farm land is vanishing. I even noticed it in the Worden area. (*Yellowstone County Agriculturalist*)

It is beautiful along the river and fun for kids....[It's] peaceful....We sit out on that patio in the evenings and listen to the ducks and the geese and watch the pelicans in the sky....[We see] beavers in the river,...marmots....The deer like to run through here....The river islands now have turkeys on them....[We're] seeing the turtles....The river is...unique...and it's free-flowing....It's a beautiful river.
(*Yellowstone County Residentialist*)

The growth of subdivision developments is understandable when one takes into account the many attractions of these residential settings:

It's beautiful....It's located on the slope that drops down to the river bottom....Since the house was elevated, we get a great view of the river and the water fowl on the river and the deer in the pasture and the pheasants in the yard and all the other great things that go along with living out in the country....I love to watch the ducks and geese and pelicans and the critters that habitat the river.
(*Yellowstone County Residentialist*)

Here in Montana, we...really don't care if there is a city park next door because we've got a little greenery in our...five-acre-tract....We are a plains culture. You don't see three story houses with huge oak trees....We have a different look, we have vistas, we are flat and wide. We are not high rise people....They bring planners from the east to tell us how to do things, they want to stack us up

downtown and make everybody believe we are all going to give up driving our automobile and move back downtown. It isn't going to happen....The market demand is for a little elbow-room....It is not a Boston, Massachusetts....If you want people to come here to live and work, they've got to have a nice place to live, nice schools, and they have to have a job....That precipitates housing, schools,...paved streets,...and so on. So I think we need to...keep protecting that that makes Montana great. Let's protect our water, protect our air, protect our space...but allow growth....There is no reason that we can't enjoy this same lifestyle with a \$250,000 house or 250,000 population. Right now, we are at a 100,000 population. What's the difference? (*Yellowstone County Local Civic Leader*)

However, concerns about subdivisions multiply as more and more are constructed. In particular, concerns are voiced regarding the long term costs associated with residential development, the lost character of the river as the banks are transformed from agricultural to residential uses, and lost points of access to the river as a public resource:

We're seeing some development with the golf course; that's bringing in quite a few more houses. And we get a lot of people out here that are bedroom community. You know, it's a bedroom community so we get a lot of people that don't want to be in Billings. It's cheaper out here. You don't have to pay the city taxes, so I expect that we'll see some development. (*Yellowstone County Residentialist*)

Urban sprawl [occurs] because people wanted to get...cheaper land....It used to be that the city...was able to zone [up to] five miles around the city. Well, the legislature struck that down. Can't do that—can't be zoning, even though these places are going to be in the city someday and they don't meet city standards. The streets aren't the right width, they don't have sidewalks, curb, gutters, sewer, they don't have the same grade of water system piping....Then [later] the city has to annex [those areas] and assume the costs....If you happen to through those subdivisions south of Grand and west of Shiloh, you'll see that the roads have no curbs or gutters....They are very narrow little country lanes with huge homes....They were trying to sell [one home] for \$1.4 million, [and] it's got this road that doesn't meet cross sectional design requirements....People will spend \$300,000 to \$400,000 for their house...[but] their infrastructure is awful. So, it's a \$500 saddle on a \$50 horse. (*Yellowstone County Local Civic Leader*)

For farmland, we could pay \$1,800 an acre, but they are getting \$18,000 an acre for that stuff. I don't see us continuing to farm in the next generation....Maybe another 20 years, and then it will all go to houses. (*Yellowstone County Agriculturalist*)

I think another problem with people building so close to the river is that, aesthetically, it's not very pleasing....From what I understand they're going to put in some riverside trails....Hopefully [those trails] will keep the areas pristine and

wild....It ought to be just like the rims, [with] easements that set aside that [area]....Don't allow people to [build] right up to the river. (*Yellowstone County Recreationalist*)

The Department of Fish, Wildlife and Parks was proposing a fishing access site near the Duck Creek Bridge....A few of the people that built homes right on the river [near the bridge] were at this public meeting. Their big argument was, 'We don't want recreationists on the river. We bought a piece of the river to have it for ourselves, and we don't want the public out there.' And really that's the kind of attitude that just can't be tolerated by our public managers....The Conservation Districts and the County Commissions [have to protect] the greater public interest,...not those few individuals that bought their little stretch of the river front....They really need to look at the long-term public interest and the real values that that river has for the greater public into the future. (*Yellowstone County Recreationalist*)

I think it will change drastically as far as people building along the river...[and how] that relates to access to the river....I think that a whole lot more private access show up...[and] it will detract from [the public use] of those areas of the Yellowstone....If it were mine, I would do the same thing. I think that is the way it should be as far as landowners' rights....I don't feel encumbered by houses on top of me. I might when the number doubles or triples or multiplies by ten, and it will. (*Yellowstone County Recreationalist*)

In the eastern-most areas of the county people seem less concerned about Billings and its growth, but even there people recognize the potential for growth:

East of Billings you're not going to see major changes because agriculture is still king. There isn't going to be huge development. There will be some...out by Pompey's Pillar, if it's not all burned up,...[and] some development along the river [in] Park City....[In] Columbus [and] down this way, you're probably going to see...the smaller acreage type of things happening, which is going to take out some productive cropland, and some of it isn't. (*Yellowstone County Agriculturalist*)

While it is easy to note that Yellowstone County is changing, it is more important to recognize the extent to which those changes suggest or necessitate changing relationships with the river.

Redefining River Relationships: Urban and Residential Demands

As Yellowstone County evolves into a more urbanized community, a number of issues are being discussed that suggest the community's relationship to the river is also evolving. These re-definitions of how people use, appreciate and adapt to life by the river are grouped here as the second theme exposed by the data collected in the segment Big Horn River to Laurel.

Individuals representing each of the interest groups offered comments that illustrate how the river adds to their quality of life and serves as an amenity to the community. Foremost, the river environs offer people a refuge from their more stressful and chaotic endeavors:

A retired teacher told me he thought [fishing] was just an excuse for doing nothing, so he never fished. I thought he missed something in his life. Even if it's a good excuse for doing nothing, it's a great way to do nothing....I'm pastor and I'm involved in a lot of things....I go out there...[and] the pressure's gone. [I like to] watch the river. Something's moving that I don't have to push. (*Yellowstone County Recreationalist*)

It's peaceful. It is just someplace that we have always wanted to be. We both were raised on acreage. We weren't town-oriented at all. (*Yellowstone County Agriculturalist*)

I've always gravitated towards it because it's always relaxed me....My church is the river....The fog comes up off the water....The sun pops up and your line is singing out there and you look down and see the little crystals on it, then I look down and see a herd of elk crossing a couple hundred yards from me. It gives you....It's what drug addicts are, the reason they're drug addicts....It gives you that feeling...with no side effects,...other than you're hooked....I'm not leaving here....This is a place to keep forever. (*Yellowstone County Residentialist*)

We're out in the country. We have a view of the mountains. The neighbors aren't that close. We have a little open space to breathe. (*Yellowstone County Agriculturalist*)

When you go down [to the river] you might see somebody else. But you could be down there all day, or all morning, and probably not see somebody else. I have an eight to five job, where I answer the phone 100 times a day and solve everybody's problems, and when I go out duck hunting or fishing or hiking, the only problem is, 'Should we stop here for lunch or over there?' (*Yellowstone County Recreationalist*)

It's beautiful down [by the river]. You still got your wildlife down there, and that's what people like....With Riverfront Park, people are utilizing that more. That's great. And then with the new McCall subdivision going in, I think that's going to be good. I think people are looking at it and finally realizing we've got beautiful scenery here, we should use it....Riverfront Park was a beautiful idea....If we could do that...along different areas of the Yellowstone, I think it would be great. (*Yellowstone County Local Civic Leader*)

It's wild. It's untamed. It almost speaks to me. It's a spiritual thing. When I'm on the river, and I just flow with the current, it relaxes me and it kind of de-stresses me. (*Yellowstone County Recreationalist*)

[In Huntley] we were going to put some paths in, and we wanted to incorporate the east side of the river....[We wanted to] incorporate Main Street and go around the park. We wanted to tie it all in....There are plenty of places to access [the river], but sometimes they've come and gone with ownership. [Some people] get a little wrathful about people crossing their land to get to the river, but I think...it comes down to communication. The people that want to use the river need to...ask [permission]...[and] close the gate when it's closed. (*Yellowstone County Local Civic Leader*)

For some, the river environs offer important ecological services that should be respected:

[The Yellowstone River is] one of the most important riparian areas in this part of Montana....The riparian zone is a place that is adjacent to the river and it extends from the river back two or three miles....It's important for bird species and animal species...and aquatic [life]....[It] filters out the dangerous things that might filter into the river. It decreases erosion...and aesthetically it's very pleasing....[It is nice] to kayak the river and camp along the shores in the cottonwood groves. (*Yellowstone County Recreationalist*)

Well, I guess Aldo Leopold probably said it the best, 'The flood plain belongs to the river.' (*Yellowstone County Recreationalist*)

However, for many more people, the river is associated with wholesome human sensibilities and family values:

I think it was a good place to raise a family. We have a lot of history here. (*Yellowstone County Agriculturalist*)

To me, it goes back to mental health....[We] need that ability to be outdoors and enjoy. Our kids...and grandkids are becoming so much more urbanized....Kids don't have the kind of freedom...I had when I was younger. I think we need those opportunities to keep a sane community....That's why it is so fun to live in Montana because you've got so many opportunities to do that. (*Yellowstone County Recreationalist*)

I was going to say recreation, but it's not recreation: it's a refreshment, a rebuilding time. I bought this when I was still working full-time, and working with people and you're uptight, [and] you come out here [to the river] and can renew yourself. Even busy working, irrigating, it's a great way to refresh yourself. (*Yellowstone County Residentialist*)

Industry [owners] will...be looking for quality communities to live in, and the river can be a tremendous asset for quality of life enhancement. (*Yellowstone County Local Civic Leader*)

I am surprised that you use the term river recreationist. It almost belittles the use because it is not just a matter of recreation. Recreation almost trivializes it, like it is something we don't need to do. With the river it is more than a matter of recreation, our very life depends on the Yellowstone. (*Yellowstone County Recreationalist*)

Long term residents of Yellowstone County recognize that, in some regards, the river is treated better than it was in the past:

I think the attitudes of people have changed from [the river] being a garbage dump to more of recreation or beauty. [The change] has taken place gradually over the years. Hopefully it will stay that way. (*Yellowstone County Agriculturalist*)

The refineries [used to] put their waste oil in ponds and it seeped into the river. In the '30s and '40s you could see the colors of the rainbow in the water from the oil. They have really cleaned that river up. It is amazing. It is really clean now. People are pretty careful about dumping stuff now. If they catch you, they will fine you. Years ago they used to dump their garbage in. (*Yellowstone County Agriculturalist*)

Oil slicks [occurred in] the '60s from spills at the plants....Those don't happen anymore, [since] the Clean Water Act....We've had a water treatment system here since 1915....[Before 1915] people died every year from cholera and typhoid. They installed a treatment system in 1915 and lo-and-behold there wasn't anybody dying anymore....On the sewage side, they didn't recognize they were the contributors to their own problem. They didn't really build any kind of sewage treatment here, other than direct drains to the river...[until] '46 or '47. (*Yellowstone County Local Civic Leader*)

When I was a little kid,...our landfill dump was down on the other side of Conoco, where Midland packing used to be—that's where our landfill used to be....That's where the garbage went, and...we would bulldoze it to the river. That's why there's so much debris....When people [went] down there and they started the bike path through there, they couldn't believe the junk that was in there. But we bulldozed that for years down there, and that's where all the junk went. (*Yellowstone County Local Civic Leader*)

Others point out that modern uses are carefully managed:

The river is not safe [for human consumption] as it is. We remove all the fine particles, all the bacteria, and the viruses that are harmful....We improve its potability in the sense of its aesthetic quality to users. It's clear, it has a good quality taste....People find it pleasant....There's lots of water that's safe drinking water but not potable. The [Yellowstone River] is a good quality source. It's a bicarbonate water. We're pretty far up the watershed. There's only a minimal

amount of interference from man, but enough that it wouldn't be safe for anybody to drink as it comes down the river. (*Yellowstone County Local Civic Leader*)

[In Billings, we treat on] average [over] 14 million gallons per day....Approximately 20,000 pounds of solids a day come in, and we put out...maybe 400 pounds....We are removing about 95 percent of the total system solids and bio-chemical oxygen demand. (*Yellowstone County Local Civic Leader*)

However, a great many people believe that the river has been neglected or is potentially threatened by human activities:

I did this Nature Conservancy thing to protect the land so it could never be developed....My kids would sell it, and there would be all houses built. We don't want that. There is enough of that around here. There is so much traffic. They drive too fast. They almost ruined my second cutting last year because it was so dusty. (*Yellowstone County Agriculturalist*)

I know there's an awful lot of pollution around....My concern is with the refinery, but I have to be careful about that because they were there before I moved in and I know they were there before I moved in....I would like to see the refinery...closed, but that's wishful thinking. Quite honestly, I don't know what they do to [the river], but I'm sure there's something that goes on, even if they say there isn't. (*Yellowstone County Residentialist*)

I would hope that the City would learn to respect the river more than they do now. The banks and the industrial development in Lockwood are just terrible. The County Commissioners think everything should be zoned industrial and Lockwood is very close to the river. I would like to see us change all of that so that all along the river it is a natural corridor. (*Yellowstone County Recreationalist*)

I think Billings is really lucky to have the Yellowstone flow through it. Unfortunately, Billings turned its back on the river and lost sight of its value. Consequently, we get a lot of bad development down by the river. It's almost like throwaway land....In some cases development is good if...it reorients us to understanding the value [of the river]....We've allowed our industries to be along the river....I see a lot of waste and bad development occur along the river....It's almost plighted. (*Yellowstone County Local Civic Leader*)

The Yellowstone River really stinks after Laurel. I mean, not that I want to lose the refinery or anything....I don't know if it's necessarily the refinery or if it's just that it's more populated from Laurel to Billings, that stretch. I don't know really what the problem is. But there's no good fish after Laurel....Keeping it clean is my biggest thing. (*Yellowstone County Residentialist*)

[In Custer] we are about to redo our whole sewer system....We do not have city water, [but] we should....The business people have to chlorinate [their water]....We've been dumping animal and human waste into this groundwater for 100 years now. These people are kidding themselves if they think it's not in their wells. (*Yellowstone County Local Civic Leader*)

It seems like we use it, but we don't honor it....We use it for our own industrial interests, but we don't seem to give any of it back to the citizens...in terms of beautifying the many spots [along] the river. Of course, it is beautiful by itself in the more rural areas. But, when it comes through the many cities,...it doesn't seem like we've done much with it. (*Yellowstone County Recreationalist*)

[Outside of the city water system, we have some areas with septic systems in] pretty shallow gravel....[And] on the bottom is shale, which is not porous. So the water...just moves down the gravitational gradient....You sink in your well...[and your water has] lots of minerals in it...It tastes like shit. You end up putting in a reverse osmosis system to get the minerals out:...[the] high calcium, high magnesium, high sulfate, and lots of nitrates. Nitrates are causing problems for Blue Baby Syndrome. About 10 mg per liter of nitrates in water is associated with babies [who are] unable to take up oxygen. So, that's a problem if you were to drink water...above 10 mg per liter, and there are areas like that out there. They need to be urbanized; they need to be put on a water system. (*Yellowstone County Local Civic Leader*)

I serve on the county zoning commission and [sometimes when] we get a request that is close to the flood plain...we don't even get a map with the request. So I ask, 'Where is this?' and they will say, 'Well, maybe a corner is in the flood plain, but it won't cause much problem.' So, we are changing the flood plain regulations....If I lived downriver from Lockwood, I would worry. (*Yellowstone County Recreationalist*)

The ranchers and landowners should not build so close to the river, and I think they [should not]...have their cattle graze right next to the river....Cattle go down to the river and drink and they trample all the...shrubby and grasses. (*Yellowstone County Recreationalist*)

As more people live along the river there are increasing pressures to protect properties, especially those with structural investments. The goals are often site-specific and are related to how the river affects personal properties:

This house used to sit down there where the pile of dirt is. I had to move it.... High water came and washed the bank away....That was the 200-year high. There used to be an island down there about 100 yards and the 200-year high took it out. The next year we had a 500-year high and it went right by me because the island wasn't blocking me....[That second year it washed away 100 feet of bank and] the

river was running right by the whole south foundation.... It cost probably upwards of \$40,000 [to move the house]. (*Yellowstone County Residentialist*)

Sometimes it's heartbreaking to see [erosion]....But, on the other hand, it's a wild river and it's expressing itself in such a way that it makes it what it is. It's a living entity that gobbles up one bank one year and might turn around and gobble up the other bank the next year. That's what's uncontrollable and that's what makes it wild and adventurous for those of us who like to get on that sort of thing. (*Yellowstone County Recreationalist*)

My next door neighbor...tells me he used to drive their old Ford truck over to the island. The deepest [the river would be] in the fall would be two and half or three feet deep. We've sounded that and we know it's eight, ten, 12 feet deep with some deeper holes....Somewhere back in late-'80s, early-'90s the river took a turn, and, instead of going on the other side of the island, ice jams and blockages of one form or another carved the river over here. And we know it's been here because everything here is a product of river sediment over the last million years, and it goes back and it goes forth. (*Yellowstone County Residentialist*)

There's always gradual change, but in a high water year, it could happen in one year, in one season....The boat ramp was carved out a little bit more this year. So there's more water over there this year in that channel, whereas it was one the other side last year. So, it can happen,...like I said, in a season. And it's always happening gradually. (*Yellowstone County Residentialist*)

It's a vigil every year to keep up with the river, to see if it's going to take out some more of the property. It's a living creature, that Yellowstone. (*Yellowstone County Residentialist*)

The time that the river changed course drastically, and started moving into our property, it was just horrific....There was a big island out there, and it was full of trees....You would hear the trees....It sounded just like bowling pins going down....It literally lifted those trees every which way out into the river....It was just unbelievable. [Then, the fallen trees were] knitted and packed with mud just like somebody had created it by hand, but it was just the force of nature....[The fallen trees] diverted the water,...which brought it into our place....It just basically changed overnight. (*Yellowstone County Agriculturalist*)

If we don't get some stabilization on that bank, this place, in ten years, is going to be in trouble, and so is everybody else in this valley if this river gets high enough. We've had two neighbors down there that it flooded already. (*Yellowstone County Agriculturalist*)

The power of that river....The water come up over that bank, and it just rolled. It was like a big roller coming at you, and it was the water coming over the banks, and the force of it, when it moved that huge ice up on the land, and it came around

there, and it went all the way up to the neighbor's house before it broke. And it broke fairly fast. (*Yellowstone County Residentialist*)

The river changes courses. The river as it exists today is changed significantly as far as meanders and the way it picks its course....I built a cabin on the Yellowstone River bank 60 years ago that is now an island, and this is just from the natural flow of the Yellowstone River....It's a natural thing for the river to do....and it will continue to change. (*Yellowstone County Local Civic Leader*)

When they start having big ice flows again,...this entire thing will be eight to ten feet thick in ice that will be exploding and cracking, and it can crush a car in a heartbeat. It breaks rocks....And that water doesn't stop....There will be ice 15-, 16-, 18-feet out from the bank, just packed in against the banks. And all that ice then cuts loose and just slops into the river, and it comes down the size of buses....You've got something that's moving five, six miles an hour by water, and it slams into stuff, it changes a lot of things. (*Yellowstone County Residentialist*)

I'll tell you where the water was one time. Remember when you drove by here? It was right up to the highway. I was here with my fins on....This road in here is new. They built it up higher, thank God. It saved us there, but here, coming around the corner, there's nothing there. The river...[doesn't] have to rise very much to get over and flood. (*Yellowstone County Residentialist*)

Other discussions address how the community ought to systemically think about and manage the flood plain:

People...call it a flood plain for a reason, and if people want to build in the flood plain, then that would tell me that you're going to get flooded. (*Yellowstone County Residentialist*)

It is appropriate to build subdivisions within viewing distance of the river but out of the flood plain....People like to live [near the river], but is also appropriate to keep park land in-between there because then you not only have the chance to enjoy the river but to protect it also. So I think we have come up with a pretty workable balance. (*Yellowstone County Local Civic Leader*)

The Yellowstone...is free-flowing and it floods a lot. So you better not put a house right on the edge of the river; it might flood and wash away. (*Yellowstone County Recreationalist*)

People want to live where it's pretty, but if you're going to build on the river, expect to be flooded. And don't cry to me when you're flooded because, if you're stupid enough to build there, then it's your problem, not mine. (*Yellowstone County Agriculturalist*)

I think there's a lot of guess work that goes into those flood plain maps, frankly....I think there are probably better ways now through GPS technology that they could very closely identify whether it is in the flood plain. (*Yellowstone County Residentialist*)

The photos are of great value to see [past flooding], but I think since that flood in '97 the river has actually changed course and you can see that in the photos from year to year. Historically, the water hasn't come up that far, but since the river channel has changed a little bit in that area and we have lost some land, even last year we lost a big chunk....I can't say what would happen in the future. (*Yellowstone County Residentialist*)

If somebody's going to build in the flood plain, they should sign something, 'I'm building in the flood plain. I'm willing to take the risk. I know what the implications are and I don't expect the government or my fellow Montanans or anybody else to bail me out if things go wrong.' (*Yellowstone County Residentialist*)

When they...develop in the flood plain...their actions can affect others. We have laws that limit what people can do on their property....Their development in the flood plain is not in the greater public interest and the greater public interest is what really needs to hold sway. (*Yellowstone County Recreationalist*)

I like the fact that, for the most part [the river,] is left open to function naturally, that there is still a lot of flood plain left, realizing that it's heavily armored in places....The flood plain is essentially storage for flows that are above normal flows. Without adequate storage, it would be discharged downstream and have to go somewhere and force itself into places that would probably cause a lot of destruction. So, if you can maintain natural flood plains, then you can pretty much protect property from inundation. (*Yellowstone County Local Civic Leader*)

If you ever notice, farmers and ranchers don't have their houses right on the banks of the river. Gosh, I wonder why. But you see the city folk [saying], 'Oh, that's a great place to build, great view. Boy, we can walk out the back door and throw the fishing line in the river; that's fantastic. We can put our jet ski out on the river right out our back door....Oh, my God, now the back door is the front door, the river has changed channels.' I'm not going to cry for those people. Common sense says you don't build in a hazard area. (*Yellowstone County Agriculturalist*)

Rip-rap is generally considered an effective method of bank stabilization:

I lost eight acres on the one field, but it was also endangering the railroad [so] they came in and rocked it....Yeah, it worked. It was spendy, but it worked. (*Yellowstone County Agriculturalist*)

In '97 we had the highest flood on record....[It] was a 500-year flood....[The] REA was afraid it was going to...flood their new unit....They rip-rapped it perfect [for] a half mile...and there has not been one piece go out of place. There's always a hole or something that may have been done better originally, but if you throw...rip-rap [in the hole] it just makes it better....To do it right, you want [there] to be about 16-foot width at the base, so you have a big strong base for the other to lock with, and then bring it up to about a three-foot width at the top....The weight crushes it down....You've got the dirt walls behind it that are packed and it doesn't seep very well. (*Yellowstone County Agriculturalist*)

I know they don't let you put concrete in the river anymore. I don't really understand that and nobody has explained it to me, so I guess I'll have to figure that out. (*Yellowstone County Residentialist*)

I've been thinking about getting some huge landscape rocks and putting them down there along the bank, just on top of the bank. I understand that concrete blocks and concrete rip-rap are out now because of the lime and all of that other stuff. So you got to come up with some kind of alternative. (*Yellowstone County Residentialist*)

Rip-rap in key locations in the river is really important for landowners. If they're not able to rip-rap, they're going to lose land. (*Yellowstone County Residentialist*)

You get a guy with more money than he knows what to do with, and he's paid tens of thousands of dollars an acre for land along the river, and here comes the damn river and starts washing [his land] away. Now he can afford to do something about that, and he will do it. What he doesn't understand is that the degree to which he does that, it is going to hammer the guy downstream. So, he has [created] unintended consequences which he's not responsible for—he should be. (*Yellowstone County Recreationalist*)

Most people agree rip-rap is expensive. Some people explain that rip-rapping can both push the problem elsewhere and result in other problems:

You...[have to] watch out. If you are rip-rapping on the south side, and somebody's got farm land on the north side, that can create some problems....We were very fortunate because there was no effect to people to the sides of us or across from us....We had no one but ourselves to protect. In fact...the river was affecting [the neighbor] tremendously, [and]...when we got done, it turned the river away from their property. They now feel safe and secure. (*Yellowstone County Agriculturalist*)

Rip-rap diverts water into the neighbors' land if you don't do it right. That is something you have to be concerned about. You could subject yourself to a lawsuit. That is something the Corps and the local Conservation District should look at. (*Yellowstone County Agriculturalist*)

Rip-rap is an eyesore and takes a tremendous amount of material. And most people can't afford it. (*Yellowstone County Agriculturalist*)

The natural processes of the river [include] erosion and deposition....I understand why [people who live near the river] would [want to stop erosion], but from a geologic or scientific viewpoint, once someone affects one part of the river it will affect another part of the river. There are consequences....If you put in...rip-rap then that may cause scouring in some places and deposition in others. You may be affecting your neighbors....Those types of things need to be considered....I think it is important to approach this from the scientific point of view. (*Yellowstone County Local Civic Leader*)

Pretty soon you have a ditch, you know, rather than a river. In some cases [rip-rap] is legitimate, in other cases it's probably overdone. (*Yellowstone County Recreationalist*)

The riparian zone along the river is altered as soon as you channelize the river. You don't have the over-bank flows...that renew the riparian zone along the river. And that's habitat for wildlife of all kinds....If left natural it can actually help alleviate flooding problems downstream. So, a lot of the times, the channelization of the stream just creates more problems....[And] there's a loss of values in terms of recreationists being able to enjoy...a viable fishery. (*Yellowstone County Recreationalist*)

[The river and the riparian areas are] less healthy for two reasons. One, there's been a lot of development taking place—I'm talking the entire river, not just around Billings. And [two, I see]...miles and miles of channelization of the river...that very seriously compromises the riparian zone. So, sure, it's gone downhill a lot in the last 30 years. (*Yellowstone County Recreationalist*)

Difficulties in getting permits are cited as a common, but not universal, problem:

After the '96 and '97 floods, there [were]...multiple projects....The Corps approved some, didn't approve too many, but as the pressures build, we will have ourselves a canal instead of a river. There's a 404 permit process [and] sometimes it works, sometimes it doesn't. It depends on the Conservation District....They can, depending on who [sits on] the Conservation District board, be very rigorous....I think there ought to be some basic principles that have to be satisfied, and I think that those are conservation of the riparian zone, and conservation of the hydrologic character of the river. (*Yellowstone County Local Civic Leader*)

I got along with them. They knew the emergency and so they rushed it through so we had it in a couple of days. They did not bitch about the emergency....It had to be done or else it was wrecked. So they allowed them to come in and fill where

the hole was leaking...then the permit followed the deal. (*Yellowstone County Agriculturalist*)

All he wanted to do was rip-rap to save his bridge....At one time, he had 20 guys standing down there on his bridge, discussing what he should do. Bridge finally washes out and down in the river it goes. The next day, to save the road, they are hauling big boulders, dumping them in...and, of course, in the spring he had to haul his bridge out. That's required....But, there you go. When you're dealing with water, you're dealing with a lot of different people. (*Yellowstone County Residentialist*)

It took us two years to get it permitted to do it right....We lost 20 to 40 acres. Had we...done it without the permit, we'd have saved that land....We stood down on the river bank looking at the project after we did it...[and] DEQ guy was complaining about a couple of inches variation in elevation....Yet we looked across the river where they had dumped in car bodies and concrete without permits. I said, 'How can you give me a bad time about doing it right, but being off a few inches in elevation, when you can stand here and look across the river and not do anything about what everybody else is doing?'...If I've got a permit...he's going to make it miserable for me. (*Yellowstone County Residentialist*)

While alternatives to rip-rap may or may not work, Bendway weirs get mostly positive reviews:

[Our neighbor] had a lot of problems with the dikes washing out. He laced willows on the face of the dike, but if there was a hole started, the river ate it out. (*Yellowstone County Agriculturalist*)

We actually looked at using rip-rap. We used to do a lot of rip-rap work....And it was just lining the bank...[to] keep the bank from eroding, but you don't...really do anything about that. The weirs...actually slow the water down next to the bank and you don't have to line the entire bank with rock or concrete....So it will fill back in with grass and trees....It looks much better when it's done and matures. And it is less expensive than lining the bank in its entirety. We just felt that was the best option. (*Yellowstone County Residentialist*)

We put weirs in....[They were] incredibly successful....If it is done right, it works very, very well. We spend a lot of money and time and energy enhancing wildlife on a property like this that we are not compensated for. We do it because we like to....I spent hundreds of thousands of dollars doing the project we did on the river, doing the weirs the way we did it, engineered right. (*Yellowstone County Residentialist*)

[Weirs] are a good idea. A guy...just put some in a while ago. They seem to be helping a lot....In some cases, [weirs are preferable to rip-rap]....[Now,] putting a

weir in still causes an eddy behind it that I think would cause some erosion when the water gets that high....You can see some kind of scalloped areas behind it. But it does push, helps push the current out away from the bank. (*Yellowstone County Residentialist*)

Bendway weirs...[can] angle the river 20 degrees and they gently move it across to the other side....It's moving the river....You can just see how it hits the first one....Then it subtly moves it out to the second, third, fourth....My experience has been the weirs create habitat. There's more fish behind the weirs....The weirs...are a blessing that's not intrusive, creates growth, creates fisheries. (*Yellowstone County Residentialist*)

We used Bendway weirs. I think we put in six of those....We have had very good success with the weirs except one....They simply keep the power of the water away from the bank. They don't wash out the side of the river. You don't ruin anything downstream, which is a common belief. They don't seem to be like the hard stuff where you throw the current to the other side. They are gentler....DNRC had some money a few years ago and they funded 75 percent of the weirs for the ditch company. (*Yellowstone County Agriculturalist*)

The Yellowstone is so powerful that we get water behind the weirs and it washes behind them....The placement of the very first one is critical. If you don't get it right, it will wash behind it....That is the hard part....The person designing those spent an entire year on that...[and] the next spring the river washed away 20 feet of river, and we were back at square one....These were the most highly engineered weirs on the Yellowstone. They must have spent 200 hours on the planning, and they had two people on site watching the placement of every rock. So there couldn't have been any more scrutiny on a set of weirs. It is not an exact science, but they work most of the time. (*Yellowstone County Agriculturalist*)

It is often difficult to grasp how a project on a particular property can degrade the river system, especially given that virtually everyone agrees that any one project probably does not have a significant effect. However, governing agencies are, more earnestly than ever, attempting to understand the summative effect of such projects. They are charged with understanding those effects before they happen as a way of preventing future damage. The result is the future is here. The various agencies must attempt to manage in ways that protect the future of the resources before they are degraded, yet they are further charged with to avoid infringing on personal property rights.

The Future is Here: Management is Complex

While it is comforting to speak nostalgically about a simpler past, most of the people interviewed in the segment Big Horn River to Laurel explain that the Yellowstone River presents a complex tangle of pressures and demands that requires rather complex managerial strategies. The river, as a shared resource, is under increasing demand. Yet, many people realize it has a limited capacity, and it will not be able to provide all things

to all people. Any number of entities—individual, governmental, formal, informal, public, and private—have vested interests in the river. Almost everyone agreed that the river is a public resource that must be shared:

It is the lifeblood of the valley....It keeps a lot of farmers in water and able to grow crops and it's a good source of recreation....I have a boat that was made for river use; it's got a jet on it. And I'd rather boat any day on a river than on a lake. It's just so much more fun. It provides a lot of habitat for wildlife that is fun to watch and fun to hunt....Fish are fun to eat and catch. So it's a wonderful thing for this valley. (*Yellowstone County Residentialist*)

It's got to be managed for multiple-use. I enjoy seeing the people on the river enjoying the river and the fishing and stuff. (*Yellowstone County Agriculturalist*)

Of all the natural things that occur...[the river] is the most important thing. It provides water for drinking, flood irrigation, and recreation. It is the lifeblood of our community. (*Yellowstone County Local Civic Leader*)

I hope we understand that the river is something that belongs to the people of Montana. Just because you own land along it, you can't really own the river. (*Yellowstone County Recreationalist*)

However, opinions vary greatly regarding the best ways to share the resources and to protect the public interests. For instance, private wells and septic systems generate discussions regarding how they affect, or do not affect, underground aquifers and the river:

I wouldn't allow septic tanks....If they want to put in a subdivision of 30 cabins along the river, they would have to pipe that water, pump it back, away from the river, away from the river gravels, maybe to a pond and have their own septic system there. (*Yellowstone County Recreationalist*)

[When] the high water comes, or you have an ice jam, or...the spring run-off [comes], you flood your septic tank or cesspool...[and] that material in that pool goes right into the river. There's a capacity for the Yellowstone....You can exceed that capacity, and then you have a real problem....We need those setbacks. (*Yellowstone County Recreationalist*)

There's a lot of issues with subdivisions....Look at how we look at drain fields on the septic systems. You have places where the groundwater table and the septic system are mixing, but,...mathematically, it doesn't appear to be an issue. See, the problem is this subdivision may not be an issue, but what about [adding] the one above it? Now there's 72 houses above in this aquifer...but the assessment was done here [on one subdivision]....This is decided and this is decided [separately]. We never go like this [and look at all of the subdivisions together]. (*Yellowstone County Local Civic Leader*)

These guys were here this morning...[concerning] a piece of private property out in Lockwood [near] the river. He received a permit to build a cold storage without a restroom. Now he comes back and says, 'You know I need a restroom.' We are denying it. He is into the flood plain, and his permit was clear. It identified that you're in a flood plain, and you cannot build a sanitary system there. The statutes don't allow that so he is not going to get a variance. (*Yellowstone County Local Civic Leader*)

As that aquifer [west of Billings]...can only become more contaminated as more development sits on top of it...[and] the [irrigation] ditches are shut down because there's no agriculture anymore....If they are annexed they would have to get on the [city system]. So, there's a cost there. (*Yellowstone County Local Civic Leader*)

What's the cumulative effect [of development] on the underground aquifers?...I don't think it is as big an impact as people are trying to make it to be....I think we have plenty of water. It snows like heck every time, and we [have] water coming down the Yellowstone....And if you read in Genesis, God set the whole thing up to where the river comes down, [and] evaporates, and the salt sea is almost a purifier....Now, that's a pretty good ventilation system that He developed. And that's here in Montana. Now we are running through some droughts, and you can get into global warming....But what I see in Montana is, we've got lots of water. We are not going to run out of water unless there is this global shift that changes things. (*Yellowstone County Local Civic Leader*)

Any number of topics comes up when the residents of Yellowstone County are asked about the management of the river. Agriculturalists discuss many issues, for instance:

I own this property, and the State owns that river. I understand that and I am perfectly fine with it. I can't go out in that river and mess around, because that is the State's. So, I think the State should have to keep that river off of my property, too. If I can't mess with the river, why can the river mess with me? (*Yellowstone County Agriculturalist*)

I am not a supporter of letting the river meander. Why must we destroy an acre of mature cottonwood trees that are 100 years old in order to provide areas for new ones? (*Yellowstone County Agriculturalist*)

The most important resource that Montana has is the Yellowstone River, and we're giving it away to downstream interests. We should not be doing that. The Federal government should not be allowed to do that. (*Yellowstone County Agriculturalist*)

The County came out here, and they told us all these things we needed to do [about the weeds,]...or they can come out and spray it and charge me money. I told them, 'You go up to the head of the Yellowstone River and you kill all the

knapweed and spurge down to me, and then I will kill mine, and then you can go on down there. Until then, there's nothing we can do about it.' I can...show you every place that river has ever overflowed—it just spreads them weeds, and that is exactly where the knapweed and spurge is. (*Yellowstone County Agriculturalist*)

Local civic leaders have a number of concerns. To name a few:

Obviously, you need to maintain in-stream flows....There needs to be flowing water to provide for those plants and animals...but there is typically more water than that. (*Yellowstone County Local Civic Leader*)

Under the state constitution in Montana, you don't own water, you own the right to use water. And [the various users are] aligned by, 'First in line, first in right'....A full listing [of users] and a full court decree [defines] who is first, and if they're first, how much water can they take. That's what a general stream adjudication is....In the end, if the court ever has to administer the waters of the stream, they have to have the list to do it correctly....But in the older basins history has shown that sometimes you have to [go to court] more than once because they never get it quite right. (*Yellowstone County Local Civic Leader*)

There is much of the Yellowstone River from roughly Huntley east...that is in need of official flood plain mapping....Say a subdivision comes in that is near enough to a flood plain that...a 2,000 foot proximity to drainage area kicks in...If it does, then these [flood plain] stipulations enable one to determine the proper setbacks. (*Yellowstone County Local Civic Leader*)

We have supported the Yellowstone River and Parks Association and looking at the trail process through Yellowstone County....We recognize the river greenway and how important it is. We are starting to see subdivisions pop up that are using that as selling points....We have Riverfront Park and have worked with the County Parks Association....Our whole trail project of trying to intertwine the city and the trails along the river....We may not have perfected it like Great Falls. (*Yellowstone County Local Civic Leader*)

[Landowners] do not have the right to...do anything they want....[In one] situation, where [a fellow wanted] a subdivision,...[there was a] big petroglyph on the site...[and this] conservative planning board...[was] saying, 'The guy owns the land and he should be able to do what he wants with it.' Now, wait a minute....This is a cultural resource. It belongs to all of us....[We can] force this guy to do a cultural resource inventory, which would be really expensive....But, [he can also] register this site with the State Historical Society and...put a deed restriction on the lot. (*Yellowstone County Local Civic Leader*)

Recreationalists' concerns include topics such as:

I think that we've been really lax in our state, county and city government. They've been allowing people to build too close to the river, and then the river rises in the spring, floods them out....Then, first thing you know, the people start rip-rapping and protecting the banks. (*Yellowstone County Recreationalist*)

The pressures from industry, agriculture, and urban areas are not benign on the quality of the Yellowstone River. Also, we're beginning to channelize the river and drastically affect the biota, the quality of the water, the quality of the scenery, and the quality of the recreation potential. It has limited capacity to supply all of these things....It's over-adjudicated and it's under-regulated, but there's not a conservation strategy....There's a direct tie [between] how well we manage all these activities and the health of the river. (*Yellowstone County Recreationalist*)

The private property lobby has tried half a dozen times to turn over our stream access law in both State and Federal court and [the lobby] lost every time. They're afraid of...the setback strips [and] controlling the kind of thing they do in the flood plain....They are worried...that [the river] is such an important public resource that there will be some kind of limitations on what they can do on their land. And there probably will be. (*Yellowstone County Recreationalist*)

I really believe that every species has a place and...if you didn't have one species, it would hurt another species. So, it's very important to keep that...riparian zone....If you don't keep that, [a species] is going to die, or become extinct, and that's going to throw everything off. (*Yellowstone County Recreationalist*)

The riparian area should all be restored. We have a lot of restoring on the river that needs to be done....[A natural corridor is] a natural habitat area. It does not mean [a] lawn right down to the river that is sprayed with pesticide to keep it green. It does not mean that. To me, [the riparian area] is a natural, protective thing. Maybe there could be bike trails and walking trails so people can enjoy that. Not storage and parking lots. (*Yellowstone County Recreationalist*)

Public access is being squeezed....When people...pay tens of thousands of dollars for small acreages up against the river, they don't want a lot of company there. A lot of them don't like it honorary either. The tendency is, and will continue to be, to close off access....Landowners, who own 84 percent of [river access in Montana], say, 'We don't want to have you here. We bought this...for ourselves, and we don't want it where you can go through here.' (*Yellowstone County Recreationalist*)

We have the tension between an urbanizing population and a rural philosophy legislature. And generally governmental bodies...lose opportunities for the parks and access....So the immediate problem is that you have this significant population influx, and subdivision development, and it's bumping into the rural

philosophy of ... 'Leave us alone. This is our land we can do with it what we want.' So, that's having an immediate effect. (*Yellowstone County Recreationalist*)

Residentialists also discuss a great variety of management concerns:

They change the rules. Like if we want to do something in the river, we have to go through six agencies to do all this crap. Laurel was having trouble getting water. They just take bulldozers and drop them in the water and do whatever the hell they want. If I did that I would have been fined quite seriously. So they don't enforce the laws equally either that do exist. (*Yellowstone County Residentialist*)

I just disagree with that whole concept of habitat management. I don't think it needs managing. I think it needs maintenance....Managing the river itself... would sure be nice rather than spend money trying to figure out which way to make the river go. It would be really nice to get the dead stuff out of here, because it is...a fire hazard. (*Yellowstone County Residentialist*)

I guess my biggest concern would be to lose any [boating] privileges that we currently have....If you get enough canoers and kayakers together to get the river to themselves, that would be a big deal to me. (*Yellowstone County Residentialist*)

They need to choose areas [for public accesses] that you can really move up and down. It's a waste of money to have them in the wrong spot....Because the high water mark is right to the edge...[and you have] the concrete down there that's really unsafe to walk on or you've got a 12-foot bank....You have to get up and over the high water mark to get around and that's illegal. So if they did choose any kind of more accesses, they need to find the spot where they can actually get around a little bit. (*Yellowstone County Residentialist*)

Taken together the above examples suggest that the most difficult management task is to balance the rights of the private property owner against the need to protect public resources. Many people offer insightful comments that suggest ways to build a robust and palatable management approach:

You have to have a benchmark....[Then] you can look and see if something is having a devastating effect or no real effect. This mapping is the first step. You can't make these decisions without it....[We need to know] what are the cumulative effects, as opposed to...just hot air in the wind....You [need] a firm basis to make your decision. That way they can make intelligent decisions. That is the major role [for management]. Eventually they will be able to make decisions because they know what has happened and they will have evidence to support those decisions. (*Yellowstone County Agriculturalist*)

You have to have a goal...[and you have to] see the pieces of the puzzle that you need to produce that goal. Then move forward. If you're so hesitant to move

forward that people along the roadside are going to grab you and take you away from your goal, then chances are you have to step back and evaluate because maybe you don't really understand your goal. (*Yellowstone County Agriculturalist*)

We respect private property rights, but we also respect the fact that the river is going to flow where the river deems that it needs to go. And if you build homes in the floodway and the flood fringe, you are probably going to get wet. We saw that a few years ago....We watched Bill Keller's place, over in Custer, as the river chipped away...at the banks and then all of a sudden we watched the building fall right into the river. It is still a free-running river, the Yellowstone, and she has a mind of her own. You have to be respectful of that. You have to understand that we have many, many uses of the river, but we also have to know that if we are going to do subdivisions,...we need to make sure that people are safe and that they don't affect this river. (*Yellowstone County Local Civic Leader*)

Bureaucracy is a tool that you can either use to your advantage or disadvantage. The fellow that [complains] probably doesn't realize the benefit he's getting from these layers of bureaucracy. (*Yellowstone County Local Civic Leader*)

[I heard it] said our society has a bundle of sticks and society...controls those sticks. They issue them out one at a time to private landowners, and they can take them back to depending on the situation. I think most of us don't want to do away with private property. We all live, or were raised, on private property, for heaven's sake....But there comes a time when private property might be impacting [the] public resources of our society....There has always been some limitations....As an example, you can't sell your topsoil to the Saudi Arabians...But that doesn't mean that's the end of private property. It means that society is going to take back a few sticks. (*Yellowstone County Recreationalist*)

If you look back at the history of the United States, the public land and the public water have been enormously important. Our champions are people like Theodore Roosevelt and the national forest, the national park, the national wildlife refuge, the national monuments. All of those are part of the public estate, and we think the public estate is very, very important to our society—equally as important as private property....Our position is, what's private is private, but what's public is public and it should be treated with the same level of respect....You can't have private water where the Constitution says it's public, anymore than you can have public water if the Constitution said it was private. And we don't just sue every time we turn around. We talk to people. We try to convince them it's wrong, that they shouldn't do it, but we have a hammer and we'll use it. (*Yellowstone County Recreationalist*)

I really think that the authorities should be more flexible in allowing landowners to protect their property. It's such a hassle to go through all the steps it takes to put rip-rap on your property....There has been hundreds and hundreds of acres

lost here....I feel for the larger landowners that have a lot of river frontage that lose a lot of property every year and really can't do too much about it.
(*Yellowstone County Residentialist*)

Make a comprehensive plan as to what is allowable and a process to permit it with ease, rather than fighting every step of the way....You get it so difficult, people just say, 'It's not worth the energy [to get the permit.] We'll do it anyway,...[even] if they put us in jail.' And I can't blame those people. (*Yellowstone County Residentialist*)

Any number of other conversations can be found within and across the four interest group analyses included in the next sections of this report. This summary addressed only the three dominant themes in hopes that the readers would be encouraged to further delve into the details of each interest groups' concerns.

Big Horn River to Laurel: Agricultural Interest Group Overview

Sixteen interviews were conducted with individuals representing agricultural interests, including farmers and ranchers. Participants were recruited from referrals provided by the local Conservation Districts, the Yellowstone River Conservation District Council and the Montana Office of Natural Resources Conservation Service.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|---|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Big Horn River to Laurel: Agricultural Interest Group Analysis

I. Specifics of an Agricultural Perspective

A. Lifestyle and Way-of-Life

It's peaceful. It is just someplace that we have always wanted to be. We both were raised on acreage. We weren't town-oriented at all. (*Yellowstone County Agriculturalist*)

We're out in the country. We have a view of the mountains. The neighbors aren't that close. We have a little open space to breathe. (*Yellowstone County Agriculturalist*)

Everybody's got to be somewhere. I like where I'm at....It's secluded, [yet] it's not a long ways to get somewhere either. I've had some people tell me they couldn't live there because they'd just sit on the porch and watch the river go by. (*Yellowstone County Agriculturalist*)

You have wildlife that swim the river. There's even whitetail hunting right down in here if a person chose to do that. There's pheasants, prairie chickens, a lot of wildlife, badgers, coyotes. (*Yellowstone County Agriculturalist*)

Mink, otter, we have all kinds of squirrels, rock chucks, yellow-bellied marmots. There are quite a few bull snakes. We used to have rattlesnakes. Two years ago we had one, but we don't have many....We never kill a bull snake. They eat a lot of mice. I saw one the other day that was as big as my arm and six or seven feet long. I stepped on a bull snake one evening in the grain field and I must have went about 20 feet in the air. (*Yellowstone County Agriculturalist*)

It is a place to live, I guess. The old homestead. We are not like the people that move every two or three years and change jobs. We are different. A lot of country people are that way—they stay in one spot. (*Yellowstone County Agriculturalist*)

I was supposed to retire this year and I ended up irrigating and putting up 4,500 bales by myself. That is hard work. The neighbor was supposed to take over the hay...and he let me know too late that he couldn't. If you stay on the place, there is always something to do. (*Yellowstone County Agriculturalist*)

We love this property. My wife and I have lived here since 1941. We raised our children here. Three of our four children are college-educated. My wife has never lived anywhere but here, and she tells me, 'I have lived here all my life and I am going to die here.' I've told her, 'I hope that we still own it.' It's getting harder and harder to make ends meet. Machinery costs are prohibitive, our property taxes are

atrocious, and our property insurance is out of this world. (*Yellowstone County Agriculturalist*)

Since the fuel prices went up...the people that are in cattle, stay in cattle. They're not switching around. (*Yellowstone County Agriculturalist*)

Want to buy it? Write me a check, I'm gone. I can't afford to leave. (*Yellowstone County Agriculturalist*)

We've just been here for so long. We own it, but somebody else is going to have it someday, and I want to leave it in as good a shape as it was when I got here, if not better. We're real careful that we don't waste a lot of water. (*Yellowstone County Agriculturalist*)

I think it was a good place to raise a family. We have a lot of history here. (*Yellowstone County Agriculturalist*)

Farming is a full-time job. (*Yellowstone County Agriculturalist*)

I guess I'll stay here until the river comes up to the porch. (*Yellowstone County Agriculturalist*)

B. Land Should be Productive

It is a very productive area, producing excellent crops on land irrigated out of the Yellowstone River. If it wasn't for the Yellowstone River, there wouldn't be anything here but desert. (*Yellowstone County Agriculturalist*)

Some of the land we leveled ourselves. We have two scrapers and we leveled quite a bit of the land ourselves. By leveling the land and making the irrigation more efficient, it accomplished two things: the land became more productive and we were able to use much less water. (*Yellowstone County Agriculturalist*)

The upper part I leveled and made a field. It is pretty good productive land. (*Yellowstone County Agriculturalist*)

The gravel that the river washes out of its banks ends up in big gravel bars and islands...that are not productive for anything except for noxious weeds. (*Yellowstone County Agriculturalist*)

Without water you couldn't raise anything. Especially on top. There is so much gravel. That is called cactus flats because that was all that grew. Any moisture just went down in the gravel....You have to use fertilizer. The nutrients do wear out and are used up. On dry land, where you don't have the moisture and don't produce a heavy crop, they last a lot longer. (*Yellowstone County Agriculturalist*)

Down around Columbus, you start getting into row crops, and corn, and beets, and into a lot more expensive land—a lot more productive land....We've got to protect some of that. Urban sprawl is taking that out. (*Yellowstone County Agriculturalist*)

I thought this farm would be a good place for a subdivision when I retired. I looked for three years for that kind of place. (*Yellowstone County Agriculturalist*)

C. Rural Ideals

I own this property, and the State owns that river. I understand that and I am perfectly fine with it. I can't go out in that river and mess around, because that is the State's. So, I think the State should have to keep that river off of my property, too. If I can't mess with the river, why can the river mess with me? (*Yellowstone County Agriculturalist*)

The biggest problem that I think is going to be faced on the Yellowstone is ignorance of the natural process, and bad practices. They blame everything on the farmer and rancher. Well, there aren't many left....Those guys [still farming] are getting old, and they're selling off. (*Yellowstone County Agriculturalist*)

Farmers are stewards of the land. And until the recreationists become the same stewards, you're going to have problems. The folks in the Greater Yellowstone Coalition, they're not stewards of the land. They don't have any idea what it is to manage that land. (*Yellowstone County Agriculturalist*)

Unless you're raised around livestock, you don't know what you're dealing with. City people are not well educated in hazards. They'll go out and think it's a pretty-looking buffalo in Yellowstone [Park] and get gored....Those are city folk that don't understand that cows and horses and bulls can take exception every now and then from being totally docile. I don't care how fast you are, if a bull's coming at you short distance, he's going to outrun you and then he's going to hurt you big time....An OSHA manual came out in the '60s, [and] the title of it was 'Livestock are Dangerous.' That is true. (*Yellowstone County Agriculturalist*)

There are too many people [who] are too far away from having a little dirt under their fingers from working the soil, and they just don't understand exactly what all of it is. (*Yellowstone County Agriculturalist*)

D. Individual Rights are Important

You've got to allow the owner of the land to do what is in his best interest and the land's best interest. And if you start stepping on that, then you're violating their property rights and their personal rights, and that isn't quite what this country was founded on. (*Yellowstone County Agriculturalist*)

It amazes me the number of people that are not connected to the land and that have no respect for private property issues. (*Yellowstone County Agriculturalist*)

II. Agricultural Descriptions of the River

A. The Yellowstone is Evolving

This river is still evolving. It will evolve for the next 1,000 years. And there will be changes in the river and sedimentation—every time a chunk of bank falls into the river it creates mud. (*Yellowstone County Agriculturalist*)

When we were kids we ice skated on the main channel. It was three-feet thick. My grandfather marked a road on the ice from Huntley to Billings. All of the homesteaders drove to Billings on the river. (*Yellowstone County Agriculturalist*)

Years ago, the Clarks Fork used to run into the Yellowstone right here....Now, the Clarks Fork enters up there by Clark's Camp....If you get real old maps you can see that the channel was right over here....The river is slowly cutting this way, and I guess in another 1,000 years it will cut back that way....You can just look across [at] the old growth timber, the big trees way back and then the young growth out here in the front. (*Yellowstone County Agriculturalist*)

B. Ambivalent Sentiments about the River's Character

Montana is the number one watershed area on the North American continent—number one....A good share of [Montana water] comes down this Yellowstone River. A lot of it will go west into the Snake River. A lot of it will go to Three Forks and will go the other way into the Missouri. But it's all Montana water. (*Yellowstone County Agriculturalist*)

This Yellowstone is a mean, mean river during flood time. I live right on it. I know all about it. It's mean. It runs fast and it runs deep. (*Yellowstone County Agriculturalist*)

It's a floating garbage pit....It washes away the land, and it washes away the trees....There's all kinds of decaying trees in the water. Does that do anything for clean water? (*Yellowstone County Agriculturalist*)

It is a beautiful river to take your family out on. It can be a great experience. (*Yellowstone County Agriculturalist*)

I think the attitudes of people have changed from [the river] being a garbage dump to more of recreation or beauty. [The change] has taken place gradually over the years. Hopefully it will stay that way. (*Yellowstone County Agriculturalist*)

C. Comments on Free-Flowing

People have more respect for the river. Everyone knows that the Yellowstone is the last free-flowing river in the United States. They could have dammed it and made a big lake and then irrigate out of it. (*Yellowstone County Agriculturalist*)

I know they want the Yellowstone River to be a wild and free-flowing river, and in some areas, it is. But wherever we've had to put in rip-rap material, or bank stabilization, or what-not, it really isn't anymore....It really isn't wild and free-flowing....People have to protect their property, their homes. (*Yellowstone County Agriculturalist*)

I'm no longer in favor of the free-flowing river. You can have a free-flowing river, but you've got to protect some of the assets. One of the assets is this irrigation ditch that waters a lot of farmland in Yellowstone County....I think we've swung too far on the pendulum [toward] the free-flowing river. You can still have a free-flowing river, but protect some of the assets that have been there, like this irrigation ditch [that has been here] since 1890. (*Yellowstone County Agriculturalist*)

You also have a lot of trouble with this river during high water. There's lots of erosion and there's lots of flooding. And, as you're aware, it's the only undammed river on the North American continent. That I don't like. (*Yellowstone County Agriculturalist*)

I understand that the Yellowstone River is the longest free-flowing river in America, and I used to think that was a great deal until I lived on it. Now I don't. (*Yellowstone County Agriculturalist*)

You have to look at it as a free-flowing river, because it's one of the few left. (*Yellowstone County Agriculturalist*)

Of course, the Yellowstone is the last free-flowing river. And it has to stay that way. (*Yellowstone County Agriculturalist*)

D. The River Goes Where it Wants to Go

We tried to change the channel...[but] once the river has made its mind up, it don't make any difference how much limestone you put in there. It's going to go where it wants to go. (*Yellowstone County Agriculturalist*)

The time that the river changed course drastically, and started moving into our property, it was just horrific....There was a big island out there, and it was full of trees....You would hear the trees....It sounded just like bowling pins going down....It literally lifted those trees every which way out into the river....It was just unbelievable. [Then, the fallen trees were] knitted and packed with mud just like somebody had created it by hand, but it was just the force of nature....[The fallen

trees] diverted the water,...which brought it into our place.....It just basically changed overnight. (*Yellowstone County Agriculturalist*)

People want to live where it's pretty, but if you're going to build on the river, expect to be flooded. And don't cry to me when you're flooded because, if you're stupid enough to build there, then it's your problem, not mine. (*Yellowstone County Agriculturalist*)

If you ever notice, farmers and ranchers don't have their houses right on the banks of the river. Gosh, I wonder why. But you see the city folk [saying], 'Oh, that's a great place to build, great view. Boy, we can walk out the back door and throw the fishing line in the river; that's fantastic. We can put our jet ski out on the river right out our back door....Oh, my God, now the back door is the front door, the river has changed channels.' I'm not going to cry for those people. Common sense says you don't build in a hazard area. (*Yellowstone County Agriculturalist*)

The '97 flood forced us to become more flexible. Our present day intake, where we have it now, is on the south side of the river and [before] it was on the north side. (*Yellowstone County Agriculturalist*)

The river is constantly changing. The river moves from side-to-side one time or another. (*Yellowstone County Agriculturalist*)

The river moves north and south. [Since we've lived here,] it's moved north....It's washed out 30 acres of our land. What we used to have, we no longer have—it's under the water. Fifty years from now it could move back south and we could regain it....In fact, it's endangering the canal down there that's been there since 1890. (*Yellowstone County Agriculturalist*)

That farm right next to me....I've seen that under six feet of water twice in one year. The big hay bales were floating. Once was at Christmas time, due to an ice jam. A lot of times it will freeze up early then it will break out around Christmas. We got a warm spell and [the water] went right through the house. (*Yellowstone County Agriculturalist*)

We sat up one night during a rainstorm and heard the river take one of these 60-foot cottonwood trees.....Just CRACK, and KAPLOOSH, and the whole thing went, roots on one end and leaves on the other. If it can do that much damage to these trees,...I don't foresee anything left of this place eventually. (*Yellowstone County Agriculturalist*)

[Our neighbor] had a lot of problems with the dikes washing out. He laced willows on the face of the dike, but if there was a hole started, the river ate it out. (*Yellowstone County Agriculturalist*)

If we don't get some stabilization on that bank, this place, in ten years, is going to be in trouble, and so is everybody else in this valley if this river gets high enough. We've had two neighbors down there that it flooded already. (*Yellowstone County Agriculturalist*)

The loss of agriculture land [due to flooding]...may be critical....You may be out of business, [especially] if you're renting. (*Yellowstone County Agriculturalist*)

III. Controlling the River with Rip-rap

A. Rip-rap Seems to Work in Some Places

I lost eight acres on the one field, but it was also endangering the railroad [so] they came in and rocked it....Yeah, it worked. It was spendy, but it worked. (*Yellowstone County Agriculturalist*)

It worked. The place is still there. The river has changed and actually it has gained because the river went back north. So, I guess [the rip-rap] was a worthwhile project for us. (*Yellowstone County Agriculturalist*)

It should have been rip-rapped many years ago, when I first moved on that place. If I had known then what I know today, I would have rip-rapped. (*Yellowstone County Agriculturalist*)

In '97 we had the highest flood on record....[It] was a 500-year flood....[The] REA was afraid it was going to...flood their new unit....They rip-rapped it perfect [for] a half mile...and there has not been one piece go out of place. There's always a hole or something that may have been done better originally, but if you throw...rip-rap [in the hole] it just makes it better....To do it right, you want [there] to be about 16-foot width at the base, so you have a big strong base for the other to lock with, and then bring it up to about a three-foot width at the top....The weight crushes it down....You've got the dirt walls behind it that are packed and it doesn't seep very well. (*Yellowstone County Agriculturalist*)

Years ago, we did a lot of rock work and that is the only thing that has saved half of the farm. (*Yellowstone County Agriculturalist*)

Farmers and ranchers protect their soil. It takes too long to regenerate an inch of soil to have it wash down the river. In this part of the country, 100 years will build an inch, and, depending on where it's at, it may take 500 years. (*Yellowstone County Agriculturalist*)

The easy thing can be done, but [it's] not allowed to by the Corps of Engineers. You could put in rip-rap, and you could reinforce the banks. They do this world-wide. (*Yellowstone County Agriculturalist*)

B. Rip-rap and the Potential for Shifting the Problem Elsewhere

Rip-rap diverts water into the neighbors' land if you don't do it right. That is something you have to be concerned about. You could subject yourself to a lawsuit. That is something the Corps and the local Conservation District should look at. (*Yellowstone County Agriculturalist*)

Water finds its own level, as you're well aware, and that's what the Yellowstone will do. If you stop it from meandering [in one] place, it's going to meander someplace else. (*Yellowstone County Agriculturalist*)

You...[have to] watch out. If you are rip-rapping on the south side, and somebody's got farm land on the north side, that can create some problems....We were very fortunate because there was no effect to people to the sides of us or across from us....We had no one but ourselves to protect. In fact,...the river was affecting [the neighbor] tremendously, [and]...when we got done, it turned the river away from their property. They now feel safe and secure. (*Yellowstone County Agriculturalist*)

Weirs change the current so that maybe the flow...shoots [across] and starts chewing on [the bank] over there....People might be upset if they don't have rip-rap to protect them. (*Yellowstone County Agriculturalist*)

C. Rip-rap and Difficulties Getting Permits

Often times, before you can get your permit, the damage has been done....All these various approvals...take from three months...to six months, maybe. But the damage is done and over before you can get [the permit]. (*Yellowstone County Agriculturalist*)

I got along with them. They knew the emergency and so they rushed it through so we had it in a couple of days. They did not bitch about the emergency....It had to be done or else it was wrecked. So they allowed them to come in and fill where the hole was leaking...then the permit followed the deal. (*Yellowstone County Agriculturalist*)

The permitting process is difficult and what they require you to do is costly. (*Yellowstone County Agriculturalist*)

I can't do anything now because of the permit system. (*Yellowstone County Agriculturalist*)

I think we ought to reinforce the banks....[Erosion is] endangering the canal that feeds the sugar beet, barley and corn farm area of Yellowstone Valley....You lose that canal system, you have no food. And yet we can't do anything to it. The ditch company couldn't even get permission from the Corps of Engineers to protect the ditch, something that's been there since 1890....They spent over \$100,000 trying to protect the ditch, but they can't get permits, can't get in the water, can't do rip-rap,

and can't protect it....They used to allow rip-rap on the river, but they've made a decision in the last several years not to do that, so they don't allow anybody to do it. You can't even protect it in Billings. (*Yellowstone County Agriculturalist*)

I think many landowners just don't have the patience, number one, to go through the process. (*Yellowstone County Agriculturalist*)

I have lived here long enough to know that the banks can be stabilized...without bankrupting you. But you can't follow all these stupid regulations....The bulk of our population is so interested in recreation that they overlook the fact that...the river is a resource. It's a resource that should be managed and should be protected. It should not be left to the wiles of flooding and high water. But I don't think [the regulations] will change....There are more of them than there are of us. (*Yellowstone County Agriculturalist*)

I don't expect them to let me put [the dike] out in the river again. I just want to stabilize the bank so that if the water comes over it, it won't cut it away....See, the real bad part about it [is that] the top three foot of this ground is just sand, and as soon as that water hits it, it just sloughs off into the river, and just keeps sloughing off....I don't care if it runs over. We can put up with it running over once a year, you know. But I just don't want it to take any more of my yard. (*Yellowstone County Agriculturalist*)

We didn't have too much trouble with the permits. They went pretty good. Not saying we didn't have little problems once in awhile. Just misunderstandings. We get along pretty good. The only thing was I couldn't get any money to help. To [rip-rap] is awful expensive. (*Yellowstone County Agriculturalist*)

I want to give the Yellowstone County Conservation District credit because I think, by in large, they are very reasonable. It's just that in many cases they are reluctant to have you do anything to the river. (*Yellowstone County Agriculturalist*)

D. Rip-rap is Costly and Few Can Afford it at an Effective Scale

I've put a lot of money into rip-rap...three-eighths of a mile,...[which is] half of my retirement fund....I think it is almost cost prohibitive now....I guess over the years I've put a \$100,000 to \$200,000 into it. That was when money was worth more than it is now. (*Yellowstone County Agriculturalist*)

The neighbors were wanting to do some rip-rap....At that time, land was only worth \$1,000 an acre, so we told them to let the river take it. The very next year, it switched, and we haven't had any trouble since. (*Yellowstone County Agriculturalist*)

I was told, 'We can't approve the using of concrete rubble.' I asked, 'Why not?' I have traveled quite a bit...and I have never been to a city on the Yellowstone where there hasn't been bank stabilization done with concrete rubble....To do what he was

proposing you could easily spend a million and a half dollars. You reach a point and ask, 'Is the land worth saving?' (*Yellowstone County Agriculturalist*)

Agencies say the rip-rapping isn't worth the investment. But once a piece of productive land is gone, there's no revenue from it. It isn't just the revenue the farmer [lost]....[Farming] supports a lot of businesses in the community....It's a hard thing to figure. The land might have been worth \$1,500 to \$2,000 an acre....but when you figure the production over ten, 15, 20 years, it grosses a lot....And it takes hundreds of years to get it back. (*Yellowstone County Agriculturalist*)

We've got the technology to do damn near whatever we want to do; it's whether [or not] we can economically do it. (*Yellowstone County Agriculturalist*)

We've got wasted cement everywhere....We should have it coordinated to where they could take it to a site, dump it on the bank, and, with a backhoe,...get it right. It ...would be helping the whole community. (*Yellowstone County Agriculturalist*)

We can get rip-rap for nothing....People are glad to get rid of it because they have to pay to take it to the dump. Whenever [my husband] sees a new project going on...he'll stop and tell them they can come out and dump it here....But we don't put anything in the water that has any steel rebar in it. Absolutely not....That's just plumb outta the question because people come by here in a rubber raft. A three-quarter-inch piece of rebar sticking up—what do you think that would do to a rubber raft? (*Yellowstone County Agriculturalist*)

E. Alternatives to Rip-rap

[I heard about] a new idea and in some places it really works. What they do is build a rock weir on an angle out into the river. The Canyon Creek Irrigation District has put some of those in, and they work very well. (*Yellowstone County Agriculturalist*)

We used Bendway weirs. I think we put in six of those....We have had very good success with the weirs except one... They simply keep the power of the water away from the bank. They don't wash out the side of the river. You don't ruin anything downstream, which is a common belief. They don't seem to be like the hard stuff where you throw the current to the other side. They are gentler....DNRC had some money a few years ago and they funded 75 percent of the weirs for the ditch company. (*Yellowstone County Agriculturalist*)

The Yellowstone is so powerful that we get water behind the weirs and it washes behind them....The placement of the very first one is critical. If you don't get it right, it will wash behind it....That is the hard part....The person designing those spent an entire year on that...[and] the next spring the river washed away 20 feet of river, and we were back at square one....These were the most highly engineered weirs on the Yellowstone. They must have spent 200 hours on the planning, and they had two people on site watching the placement of every rock. So there couldn't have been any

more scrutiny on a set of weirs. It is not an exact science, but they work most of the time. (*Yellowstone County Agriculturalist*)

A real easy way to stabilize this river, that would benefit everybody, would be to go to Columbus, put a dredge in it and dredge the river [to] about 12 to 15 feet deep.... Haul that rock out and use that rock in road building, use it in cement, or whatever. Dredge it from Columbus to Huntley. They wouldn't have any problem in this river. It just has to be deeper. It's just got to be deeper, and it would make an excellent fishery for recreation. (*Yellowstone County Agriculturalist*)

F. Rip-rap and the Question of Fish

[Rip-rap] can ruin the fishing habitat. That is the biggest thing. If you have a rip-rapped bank on both sides of the river, there is no place for fish to hide. (*Yellowstone County Agriculturalist*)

G. Rip-rap and the Question of Aesthetics

The rip-rap is unsightly, and, [when] they dump rebar...it is dangerous for the animals. (*Yellowstone County Agriculturalist*)

Rip-rap is an eyesore and takes a tremendous amount of material. And most people can't afford it. (*Yellowstone County Agriculturalist*)

Well, they've tried auto bodies and they're ugly and don't work. (*Yellowstone County Agriculturalist*)

IV. Sharing the River

A. Plenty (?) of Water

If it wasn't for the Yellowstone River the City of Billings wouldn't exist. And one of the things I think that all of us ought to be concerned about is that, with the terrific growth in population that we have, water is going to become a very valuable commodity. We have lots of water, but we make very little effort, if any, to store it. (*Yellowstone County Agriculturalist*)

I think it is too bad we can't divert it somehow, the high water, and put it to use. Once it leaves this state, it is gone. I think we could develop more agriculture if we had some diversion. I'm not sure how'd you do it. Maybe it would take a dam and that would be pretty hard to do anymore. (*Yellowstone County Agriculturalist*)

If we were without the river we would have nothing....We've got to get our irrigating water from the Yellowstone....Most of it is flood irrigation. We don't have any sprinklers....The operation is all we can handle. (*Yellowstone County Agriculturalist*)

I think there will always be plenty of water in the Yellowstone until late in the fall. There will be some shortages that show up in the fall, for irrigation mainly. The river gets so low then that people have to pump and that is expensive. I don't think they will ever put a dam on the Yellowstone. I think there is too much public pressure. The only thing is, if they could divert some of the high water, and use it when the river is low. I don't know anybody that is in favor of a dam. (*Yellowstone County Agriculturalist*)

The canal always is filled to capacity at Laurel. There is always competition. The City of Billings wants water. A lot of ranchers would like to pump [water] up to the dry land and put pivots on. There is always competition but the canal has only so much capacity. (*Yellowstone County Agriculturalist*)

Twenty-five or 30 years ago, a man named Cristafulli spent his own money...and [designed a project for]...pulling water out of the Yellowstone at the high-water time, which would alleviate all this flooding downstream....[A canal would take water out] just this side of Livingston, Montana, it would go down the slopes of the Rockies, and the canal would empty it back into the Yellowstone near Glendive, Montana. There were nine reservoirs that would be filled during high-water time that would put some nine million additional acres under irrigation in Montana....Think of the tax base that would have added to our state, not to mention the recreation and the fishing and the funning that nine big reservoirs would afford everyone....But, no sir-ee. [The Feds] said, 'You don't touch the Yellowstone waters.' (*Yellowstone County Agriculturalist*)

We applied for some reserve water....The way I understand it...[the State] would like to get the water out on land because otherwise it will be claimed downstream in other states. (*Yellowstone County Agriculturalist*)

B. Development

The way Billings is growing, the irrigated farm land is vanishing. I even noticed it in the Worden area. (*Yellowstone County Agriculturalist*)

I think between Billings and Laurel it is going to be pretty well filled in. (*Yellowstone County Agriculturalist*)

It has changed. One of these days, you're going to see a lot of houses out here. (*Yellowstone County Agriculturalist*)

In the last ten years we have four times as many families. There is less irrigation and more subdivision. There is less farming. You get 160 acres and divide it up into five-acre plots and put a horse on each plot....Subdivisions have to be approved by the County Commissioners. (*Yellowstone County Agriculturalist*)

The place right next to me sold to a doctor in Billings. He bought up the land, inflated the prices...[and now a farmer] can't buy land....The outlook hasn't been real good

on farming for the last few years....The land is too expensive, and the cost is too high to try to farm. (*Yellowstone County Agriculturalist*)

East of Billings you're not going to see major changes because agriculture is still king. There isn't going to be huge development. There will be some...out by Pompey's Pillar, if it's not all burned up,...[and] some development along the river [in] Park City....[In] Columbus [and] down this way, you're probably going to see...the smaller acreage type of things happening, which is going to take out some productive cropland, and some of it isn't. (*Yellowstone County Agriculturalist*)

For farmland, we could pay \$1,800 an acre, but they are getting \$18,000 an acre for that stuff. I don't see us continuing to farm in the next generation....Maybe another 20 years, and then it will all go to houses. (*Yellowstone County Agriculturalist*)

Eventually it will be for real estate rather than farming. I only have 500 acres. (*Yellowstone County Agriculturalist*)

All of the ground that you see between Laurel and Billings is dotted with development. Between Laurel and Park City, and Park City to Columbus, it's the same thing....I think in 30 years,...when you come off the Columbus hill, it's going to be all developed, probably to Custer. (*Yellowstone County Agriculturalist*)

When they subdivide the irrigated land, I would like to see the taxes on that land go to pay...to put water on something else. If we have to pump water 20 miles up to the dry land, the cost of that should be attached to the land that has been destroyed [for] a house....How would you do that? Politically, it is unsound. (*Yellowstone County Agriculturalist*)

C. Corridor Might Limit Development, Might Violate Rights

[A corridor is]...where...we aren't going to have any development along the river...[and] keep housing and development out of it. I assume is what they're talking about. That sounds fine. (*Yellowstone County Agriculturalist*)

As I understand it, they want to take land from the landowners along the river and make this river corridor. Let's say they have a corridor of a quarter-of-a-mile wide. That would take a good share of our productive land. I object to that. That's how we make our living. Then let's say the river continues in its wild, untamed fashion and it washes into that corridor....They'll want another quarter-of-a-mile. (*Yellowstone County Agriculturalist*)

We all recognize and value the river, and we all recognize the flood zone area. You're never going to put houses in there....It's only going to be good for cattle grazing or horses, or something like that, and if you end up having horse trails through there, or bicycle paths, no big deal....You could make out some kind of compromise so it

could be a win-win for the farmers and ranchers and for the city people. (*Yellowstone County Agriculturalist*)

D. Conservation Easements Can Protect Land from Development

I did this Nature Conservancy thing to protect the land so it could never be developed....My kids would sell it, and there would be all houses built. We don't want that. There is enough of that around here. There is so much traffic. They drive too fast. They almost ruined my second cutting last year because it was so dusty. (*Yellowstone County Agriculturalist*)

We actually looked into creating a river corridor here. We were going to have three miles of riverfront in conservation easement. We had our two neighbors and myself, and between us, depending on how much land they put in, we could have had as much as five miles. Three miles would have been easy to do. And we had the Feds and State both out here several winters ago talking to us over a couple of months. It was a terrible worthless deal that none of us wanted. We were all excited and interested about doing it, [but] the way they put that program together, I don't know why anybody would do it....The tax break is not significant. (*Yellowstone County Agriculturalist*)

With conservation easements I think that either people are afraid that the government is going to do something with the land or they don't trust the people that are issuing the easement. But I think it is a good thing because it protects the land. (*Yellowstone County Agriculturalist*)

They don't give you a break on taxes because it is an easement....I talked to the tax department quite a few years ago and there is no tax advantage. I thought there wouldn't be. (*Yellowstone County Agriculturalist*)

E. Abiding by the "Old School" Rules of Accommodation

You can go to a Montana farmer and rancher, not to the New York boys or the Californians that have bought [land], but go to a Montana farmer or rancher, and you ask permission to go hunting or fishing, and nine times out of ten you're going to get that authorization. (*Yellowstone County Agriculturalist*)

I've been pretty generous with fishermen. All I require is they close the gates and they pick up their trash. If they don't, I throw them out. (*Yellowstone County Agriculturalist*)

We wave and....the dogs go out and bark and greet them. Once in awhile you get some idiots that are all tanked up with beer...and all I ever [ask] is, 'Please, don't tease them'....We haven't had any problem with them. Most of them just wave. (*Yellowstone County Agriculturalist*)

If you want to know where the high water mark is, it's obvious. Yes, it's very obvious. (*Yellowstone County Agriculturalist*)

F. Access and Abuses

Laws keep law-abiding citizens honest. Locks keep law-abiding citizens honest. I don't know what it's going to take....Providing more access to the river may do some good, but it's doubtful. (*Yellowstone County Agriculturalist*)

I do allow hunters in. Last year it wasn't bad, but [now] I have people call and book a hunt. They were taking about 25 [deer] a year. I think last year they only took about 15....We don't allow any bird hunting. My wife likes the ducks. They raise their young down by the barn in the ditch. (*Yellowstone County Agriculturalist*)

We have pickups that come in from the access up the river, and they drive out through our place...to find a way back to the highway. That gets real old. (*Yellowstone County Agriculturalist*)

A lot of people resent people crossing their land to get to the river. [The State or the County is] going to have to have public access to the river....The problem, now, is [the public] can gain access by boating and...[then] they go on private land. That is the biggest thing I think that is going to come up. (*Yellowstone County Agriculturalist*)

We've had gates left open, cattle and sheep in everybody else's country, trees cut down and campfires on the river shore. (*Yellowstone County Agriculturalist*)

We get people in inner tubes coming down here in May and June. I wouldn't be out there in a boat in May or June....If [only] they saw the trees underneath the water, where they could catch a foot in a 'Y' and just get pulled down. And they'd never get up to breathe. They ought to go out there in August when the river is low and see how many trees they could get caught in. (*Yellowstone County Agriculturalist*)

We go down there and pick up beer cans and stuff from people having beer parties, or whatever. I accept the trash is just a part of the deal. (*Yellowstone County Agriculturalist*)

There are more thieves that come down the river. It is like a highway. My father-in-law had his boat pulled up, and they came along and stole it. You can't leave any equipment along the river. [One man] left his backhoe down there and they stole the copper and broke all the windows. You hear boats every day. You don't have the privacy like you used to. A lot of hunters will come and hunt on the islands. They will hunt on your property too. I think it is bad, [but] because the river belongs to the State, we have no say along the river. (*Yellowstone County Agriculturalist*)

V. Other Difficulties and Concerns

A. Exotic Invasive Plants—Noxious Weeds

The number one problem with the river is weeds. We have more each spring when it floods. (*Yellowstone County Agriculturalist*)

After the flood, we also ended up with a noxious weed problem that you can't believe. We had leafy spurge and knapweed, and we have salt cedar growing on the gravel bars in the river....Where the river channel had been before, it is now a huge gravel bar, a big island....There is so much salt cedar down there. When that stuff is in bloom that island was pink with blooms. (*Yellowstone County Agriculturalist*)

We have knapweed and leafy spurge, and we have more each spring when it floods. We spray and spray, but every time it floods...we have more leafy spurge and more knapweed. (*Yellowstone County Agriculturalist*)

I don't graze it because [the animals would] pick it up and we would have it all over the place. There are hundreds of deer down, and they are bad enough. They spread hound's tongue and they like Russian olives. (*Yellowstone County Agriculturalist*)

It is a constant battle with the weeds....[When] cattle season comes, the [trucks] come down the roads with loads of cattle, and they dump their crap....The rains wash it off the road and it stays there. Then, the next spring, they hire the college kids to kill the same weeds that the bull-haulers just hauled in and planted for you....It's ridiculous. It's stupid. What they could do with those bull-haulers is to make it a \$1,000 fine....When I was a kid growing up, it was illegal to ship wet cattle. You had to dry-lot your cattle 24 hours before you could ship them. (*Yellowstone County Agriculturalist*)

I work really hard at taking care of weeds. And you look in the city parks and they are full of white tops....Give us a break. (*Yellowstone County Agriculturalist*)

The disadvantage to flooding is the Russian olive, which is ruining the river valley....The only thing they're good for is a toothpick if you need one. (*Yellowstone County Agriculturalist*)

We could turn the Yellowstone into the ugliest river in the world if the weeds come in and take over. That is a great thing [the Yellowstone River Conservation District Council] has done. They have done a great job on weed control. (*Yellowstone County Agriculturalist*)

B. Cottonwoods

I realized...[that] if you don't have flooding, you don't have new cottonwoods growing. (*Yellowstone County Agriculturalist*)

My place is unusual because a lot of my pastures are covered in high water and...it reseeds all of the cottonwood trees. One year, before I did the diking, the river ran into the field and the cottonwoods grew like grass. I turned the cows in and they ate them like grass. (*Yellowstone County Agriculturalist*)

I am not a supporter of letting the river meander. Why must we destroy an acre of mature cottonwood trees that are 100 years old in order to provide areas for new ones? (*Yellowstone County Agriculturalist*)

We...lost so much land, and this was bottomland that was covered with big cottonwood trees. And we thought, 'Well, with the big, heavy trees there and the roots, we'll never have to worry about it.' In fact, the river ran in the same channel for years and years. And all of a sudden it changed. We've lost at least 42 acres. (*Yellowstone County Agriculturalist*)

The cottonwood and willow river-bottom ecosystem is supposedly an advantage....One of the problems is there's all these beavers down there. They chew up the cottonwood trees—[trees that are] six to eight feet in diameter...that Clark could have used for canoes—but the beavers eat right through them. When they eat through them, they drop that tree...[and] it kills the roots. Guess what? Those roots were holding the soil to kind of keep the river at bay. (*Yellowstone County Agriculturalist*)

A young man came in, and he was soaking wet and freezing cold. He had been on a jet ski [that] washed into a tree and he almost drowned. It sucked the jet ski under. He was able to dislodge himself after a half of an hour and walk to my house....We gave him some warm clothes....What do I do, leave the tree to fall in and it takes someone's life?...If we save a tree, we save a life. The Yellowstone can be so dangerous. (*Yellowstone County Agriculturalist*)

C. Water Quality

There are drainage ditches anymore that you can't find the minnows in....It's due to fertilizers and chemicals that come off the fields. (*Yellowstone County Agriculturalist*)

Some of the nitrogen probably gets in the water table because it goes down pretty fast. Phosphorous hangs with the soil a while. We use the waste water again when it comes through the drains. We use the same water twice. (*Yellowstone County Agriculturalist*)

The refineries [used to] put their waste oil in ponds and it seeped into the river. In the '30s and '40s you could see the colors of the rainbow in the water from the oil. They have really cleaned that river up. It is amazing. It is really clean now. People are pretty careful about dumping stuff now. If they catch you, they will fine you. Years ago they used to dump their garbage in. (*Yellowstone County Agriculturalist*)

D. Threats to Agriculture and to the U.S. Food Supply

There's a huge amount of movement away from food production here in the United States....Our society and our way of life [is moving] into a service industry. The plan is out....We can buy food,...beef and vegetables and sugars and all the rest, from third world countries....And if we do,...we loose our middle class. We will have the very rich and the very poor....The people who work the land are your middle class and we'd lose that. And it'll be the end of the United States as we know it....Then dictatorship takes over usually. (*Yellowstone County Agriculturalist*)

The environmentalist community has a strangle hold on the State of Montana. (*Yellowstone County Agriculturalist*)

VI. Managing for the Future

A. Frustrations with Local, State and Federal Management

Ranchers and farmers are kind of suspicious. A stranger walks in and they are suspicious as to why they are here and what they are after. It has been that way for years. (*Yellowstone County Agriculturalist*)

The most important resource that Montana has is the Yellowstone River, and we're giving it away to downstream interests. We should not be doing that. The Federal government should not be allowed to do that. (*Yellowstone County Agriculturalist*)

My ranches have lost probably 120 acres....I'm paying taxes on several islands out in the middle of the river, and I can't use them. But they're still in my deeded ground, and the government still taxes me for it. (*Yellowstone County Agriculturalist*)

I'm telling you, the Department of Environmental Quality has gotten so out of line....The DEQ is running rough-shod over people that live around these streams and rivers, or that have a pond on their place, or that have some cattails that might be in a flyway....Those cattails, it seems as though it's 'Hallowed be Thy Name.' (*Yellowstone County Agriculturalist*)

The County came out here, and they told us all these things we needed to do [about the weeds,]...or they can come out and spray it and charge me money. I told them, 'You go up to the head of the Yellowstone River and you kill all the knapweed and spurge down to me, and then I will kill mine, and then you can go on down there. Until then, there's nothing we can do about it.' I can...show you every place that river has ever overflowed—it just spreads them weeds, and that is exactly where the knapweed and spurge is. (*Yellowstone County Agriculturalist*)

We were all out on the river bank...and [one man] asked, 'What's the problem with car bodies?' And [an agency man] says, 'It's the oil and the rust.' I said, 'Yeah, I can understand that, but when I go to Billings and this old vehicle in front of me...[is

making] a puddle of oil....Where does that go when it rains?' He says, 'It goes in the river'....That kind of tells me that a 100,000 people make it right, and one individual makes it wrong. (*Yellowstone County Agriculturalist*)

Sure they want our water. They need it for commerce downstream. And now we have the environmental sector,...the tree-huggers from back east, and the Fish and Game has gotten involved....And it's almost a sacred word, 'Don't touch our Yellowstone.' Well, wait a minute here. God put that water here for it to be used. (*Yellowstone County Agriculturalist*)

We have not had the best of luck with some of the agencies. They all have to sign-off. The people who are in those roles, some of them, have been less active than others. We have had permits sit on their desk six months, and [we] get it back signed with no comments. (*Yellowstone County Agriculturalist*)

[Near] the population centers...the County and State government people come in and do what they want. They don't need permits [for bridges and roads]. They just do it. That one project on South Billings Boulevard would have more impact on the river than 50 private people. (*Yellowstone County Agriculturalist*)

[We] went to Miles City,...[to] both the State and Federal offices, and they said, 'You don't need any 401 permits for that project'....[So] we've been flood-irrigating through the years [and now] there's a little patch of cattails. Well, that designates it as a water route....[and] Federal gal out of Helena...says, 'Oh, wait a minute....You didn't get the permit'....They wanted to fine me \$100,000The [Miles City] offices are still up in an uproar about it because the Federal government out of Helena and Denver superseded them...[and] the fine runs \$17,700 a day. Well, this hits up towards the millions, so I finally settled with them. They just use scare tactics on you. (*Yellowstone County Agriculturalist*)

We are not concerned about clean water....It just makes a lot of people feel good. When you have tons and tons of topsoil going down the river, it doesn't do much to clean the water. (*Yellowstone County Agriculturalist*)

B. Management Priorities

The prime agricultural land that's down along the Yellowstone... should be prioritized for protection. (*Yellowstone County Agriculturalist*)

It's got to be managed for multiple-use. I enjoy seeing the people on the river enjoying the river and the fishing and stuff. (*Yellowstone County Agriculturalist*)

I don't care what anybody says—without that river, there isn't anything....Up and down the line, I don't care what county they're in. Take care of this river and it'll take care of us....That's how we've made our living since '47 is through the water in the

Yellowstone River. Without that we'd be like that dryland burning over there.
(*Yellowstone County Agriculturalist*)

They'd better look at the core industries...that are serviced by the Yellowstone River first. Then let's see how we can mesh the rest. I'm just telling you the way it is.
(*Yellowstone County Agriculturalist*)

Be conscious of what goes on upstream....[Decisions are made upstream that] impact the downstream people. (*Yellowstone County Agriculturalist*)

People...in Montana who own land, and pay taxes, [and] pay for their water... should not be disallowed to let a natural resource work against them. (*Yellowstone County Agriculturalist*)

C. *Comments on Best Management: Who and How*

You have to have a goal...[and you have to] see the pieces of the puzzle that you need to produce that goal. Then move forward. If you're so hesitant to move forward that people along the roadside are going to grab you and take you away from your goal, then chances are you have to step back and evaluate because maybe you don't really understand your goal. (*Yellowstone County Agriculturalist*)

You've got to build...the relationship. The relationship has got to be there between the sportsmen groups, the Fish and Game,...the farmers and ranchers, and the landowners. (*Yellowstone County Agriculturalist*)

You have to have a benchmark....[Then] you can look and see if something is having a devastating effect or no real effect. This mapping is the first step. You can't make these decisions without it....[We need to know] what are the cumulative effects, as opposed to...just hot air in the wind....You [need] a firm basis to make your decision. That way they can make intelligent decisions. That is the major role [for management]. Eventually they will be able to make decisions because they know what has happened and they will have evidence to support those decisions.
(*Yellowstone County Agriculturalist*)

The [Yellowstone River Conservation District] Council is the only one that can bring all the ideas together. I don't know what's going on in other counties. I would never be privy to any of that information. This group has that unique ability to bring all the thoughts together. I am not sure about the cooperation they get from the County. Maybe one of the roles is get some unifying thoughts [and] summarize what has happened. I don't know if they want to tell people what to do as opposed to maybe cataloging what has been done and the effects. (*Yellowstone County Agriculturalist*)

As far as I'm concerned, that [Yellowstone River Conservation] Council has got to get on the ball to do things for the river—to take care of the river for the future, for the people that are coming along. (*Yellowstone County Agriculturalist*)

This [Yellowstone Conservation District] Council is a must. It's going to do some good someplace, sooner or later. Somebody is going to come up with something....[Don't] get discouraged that there's nothing happening. (*Yellowstone County Agriculturalist*)

Thirty-five or 40 years ago [I heard about] the wise use of water....The 'use it or lose it' type of thing...was a step forward, but they never carried it through to wise use. Now they're getting where they're registering the wells and trying to get into the wise use of it. And that's the right step, to have somebody that knows what they're doing. And I think the [Yellowstone River Conservation District] Council has the expertise in these matters to following through with wise use....[The Council] will come out with a really positive program when it's done....They're knowledgeable people. (*Yellowstone County Agriculturalist*)

Some people aren't aware that they can't [do something]....They are naive of the law. Once they realize they need a permit they are cooperative. (*Yellowstone County Agriculturalist*)

The river is there for everyone. It is there for everybody, and we should try to keep these [extreme] groups...away. (*Yellowstone County Agriculturalist*)

Of course, the Corps has the final say in the direction that river goes. So we try to comply and understand...the big picture. (*Yellowstone County Agriculturalist*)

Big Horn River to Laurel: Local Civic Leaders Overview

Eighteen interviews were conducted with individuals holding civic leadership positions, including city mayors, city council members, county commissioners, flood plain managers, city/county planners, and water/wastewater treatment managers. Participants were identified through public records.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|---|--|---|--|---|--|-------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Big Horn River to Laurel: Local Civic Leaders Analysis

I. The Transformed Valley

A. The River, The Rims, West Meets East —This is God's Country

It's...a high plains environment situated on the Yellowstone River, the longest free-flowing river in the United States....[Billings] is bordered by the river and the rim rocks; it makes for a real unique character. (*Yellowstone County Local Civic Leader*)

It is one thing to simply look at the river...but you go back further and that is what created our rims....That view was created by the river. (*Yellowstone County Local Civic Leader*)

[This area] is on the verge of the west, and the verge of the east....The mountains aren't very far away, and the prairie's not very far away. We're kind of a mix of both, right here. (*Yellowstone County Local Civic Leader*)

Where the prairie meets the mountains. We are definitely not western Montana. We're really not totally eastern Montana. We are where the two meet. (*Yellowstone County Local Civic Leader*)

[This is] God's country....It's the best place on earth, just like the Crow Indians thought....When Lewis and Clark came here, this was a bread basket. They couldn't wait to get out of the mountains and come back here because there was food. There was food because...ranging animals moved where there was grass....There were lots of deer, there were lots of everything....[The animals] were able to move unconstrained. Humans have changed that. (*Yellowstone County Local Civic Leader*)

There would be no Laurel without that river. Pure and simple there would be no reason for us. The Clarks Fork and the confluence of the Yellowstone made this the perfect place. (*Yellowstone County Local Civic Leader*)

B. Nothing Works Around Here Without Water

[The river] is huge for agriculture, but it is huge for economic development, too. We have three refineries, and...the Montana Power generation plant takes water. Nothing works around here without water. (*Yellowstone County Local Civic Leader*)

My elders always told me, 'Whiskey was for drinking and water was for fighting.' I think it's true....When you have the amount of people...and the amount of land that is good land, the only thing that's going to prevent that from being developed is the use of water....Right now there are opportunities for development that are being held back until

you find the proper mix of how you are going to supply water....Water holds the key.
(Yellowstone County Local Civic Leader)

Of all the natural things that occur...[the river] is the most important thing. It provides water for drinking, flood irrigation, and recreation. It is the lifeblood of our community.
(Yellowstone County Local Civic Leader)

Without that water, your land values would drop...from \$1,500 to \$2,000 an acre...to \$300 to \$500 an acre...[And] not only for agricultural purposes....Your communities...are all centered along those river-ways....The river is important: from domestic water, to irrigation, to recreation. (Yellowstone County Local Civic Leader)

If you follow the valleys down, you'll find that throughout eastern Montana...the vast majority of the economy is within the boundaries of that river....And it's not a whole lot of land...[And] the water that the City of Billings takes from the river...there would be no growth potential if they couldn't do that. (Yellowstone County Local Civic Leader)

When the Federal government created that canal it was headquartered in Huntley, hence we have the Huntley Project....[So] the river is of huge importance to us....It's the mainstay of the whole valley. All of the irrigated farms—what would we do without the river? (Yellowstone County Local Civic Leader)

I think [the river] is hugely important [to the town of Custer] because we use it for irrigation. This is a largely sugar beet and corn growing area, and, of course, your irrigated lands are going to produce a lot more. (Yellowstone County Local Civic Leader)

Because of irrigation in this valley, this valley has changed tremendously from what it was in the 1870s....This whole valley was an alkaline flat....There was a nice riparian area, because the Yellowstone is a wandering river, but it was probably a mile wide at its most. Now it is ten miles wide....Obviously, you need to maintain in-stream flows....There needs to be flowing water to provide for those plants and animals...but there is typically more water than that. (Yellowstone County Local Civic Leader)

There was a man named Willard Frasier....He was an old-time mayor [of Billings]....He was a little ahead of his time. He wanted to punch a hole from the City of Billings to Alkali Creek... and he wanted to put a reservoir up on Calamity Jane. If we'd have done that then, yes, I think...we could have had a source of static water that would have allowed us to take off....Plus, you would have had the recreational facilities would have been available for a lot of enterprising businesses. (Yellowstone County Local Civic Leader)

There is a about one mile on each side of the river that denotes that drainage, and that is where you typically have irrigated farm ground, and different tree growth and vegetation associated with the river valley. Outside of that, you move in to other types of terrain.
(Yellowstone County Local Civic Leader)

There are all kinds of ecosystems that have grown dependent on man and are living where they weren't before. (*Yellowstone County Local Civic Leader*)

C. A Big, Big Cowtown with Lots of Jobs

[We] are not really Missoula, by any means. Or Bozeman. But we have a lot more cowboys than Missoula or Bozeman....We're headquarters for eastern Montana's agriculture....You can drive anywhere downtown and you can see a load of cows going down the street and a fancy restaurant. I'm not sure what we are. We're kind of a big, big cowtown that thinks we want to be a city, I guess that's how to put it....I don't know how else you [explain] Billings. (*Yellowstone County Local Civic Leader*)

[This area] has always provided jobs. My grandparents came here with the railroad. My dad met my mother and moved here from Butte....They stayed here [because of work]....With the refineries, the railroads and the medical corridor, there...[are] jobs available, and I think that is what's real distinct. (*Yellowstone County Local Civic Leader*)

You had irrigated farming which in turn brought us the sugar beet factory, which was jobs, and the railroad stopped here, and it became a retail center. I think that is really what the river did for us. It brought the first people, and everyone saw how valuable it was. (*Yellowstone County Local Civic Leader*)

I'm thinking that the industrial base will continue to grow simply because we are the largest metropolitan area between Spokane, and Minneapolis, and Calgary, and Denver, and Salt Lake....Our medical corridor will continue to grow...[because of] that whole bubble of the generations that are retiring [here]....Businesses that need transportation [locate here]....[and] retail businesses [do well because] you've got people. (*Yellowstone County Local Civic Leader*)

When we moved [to Laurel] it was very much a German cultural town. It is not that anymore. It has been a slow change, and not without its grumbles and gripes. It has been a change from a German ethnic community to a bedroom community of Billings. There are still local people, but it is not like it used to be. (*Yellowstone County Local Civic Leader*)

D. Water Cycles, The River and Recharging Aquifers

The river is formed from rain and snow that comes from Yellowstone Park....In different reaches [the river is] recharged by the aquifer system that's around it. In other areas [the river is] recharging the aquifer system. (*Yellowstone County Local Civic Leader*)

It's kind of funny, with all the projects I work in the lower end, we don't really have much water availability issues....The Big Horn dumps into the Yellowstone. They dump enough water, and they keep that fishery in good enough shape, that it pretty much makes

the river, all the way down through Sidney, sparkle. (*Yellowstone County Local Civic Leader*)

The Yellowstone, for being a free-flowing river, doesn't experience a lot of shortages....The Yellowstone is definitely the main thing for agriculture in eastern Montana. (*Yellowstone County Local Civic Leader*)

The biggest issue on the west end [of Billings is that]...they're not recharging the aquifer anymore. Eventually, who knows. That's an issue the west end study shows....That's just how it is. It shouldn't be that way, but that's just how it is...[because of] subdividing. (*Yellowstone County Local Civic Leader*)

What's the cumulative effect [of development] on the underground aquifers?...I don't think it is as big an impact as people are trying to make it to be....I think we have plenty of water. It snows like heck every time, and we [have] water coming down the Yellowstone....And if you read in Genesis, God set the whole thing up to where the river comes down, [and] evaporates, and the salt sea is almost a purifier....Now, that's a pretty good ventilation system that He developed. And that's here in Montana. Now we are running through some droughts, and you can get into global warming....But what I see in Montana is, we've got lots of water. We are not going to run out of water unless there is this global shift that changes things. (*Yellowstone County Local Civic Leader*)

II. The River as a Public Asset and a Calling Card

A. Water Rights

Under the state constitution in Montana, you don't own water, you own the right to use water. And [the various users are] aligned by, 'First in line, first in right'....A full listing [of users] and a full court decree [defines] who is first, and if they're first, how much water can they take. That's what a general stream adjudication is....In the end, if the court ever has to administer the waters of the stream, they have to have the list to do it correctly....But in the older basins history has shown that sometimes you have to [go to court] more than once because they never get it quite right. (*Yellowstone County Local Civic Leader*)

Water rights are very important....One of our subdivisions has junior water rights....[and a few years ago, during] the second year of the drought...Fish, Wildlife and Parks...said, 'You no longer can pull water out of the Yellowstone River...because you guys have junior water rights'....We asked, 'Where we were going to get water [for the subdivision]?' and they said, 'The City of Billings.' Where is the City of Billings getting it? The same river. But, the City of Billings had senior water rights. (*Yellowstone County Local Civic Leader*)

When we subdivide where there are irrigation ditches, [water supply] becomes a real pivotal issue....As we develop in these areas...we're dealing with...downstream users who still rely on the water. But people in subdivisions think they have a little creek going

through their property, and that's not the case. I can't say it's gotten any easier, but people are more aware than they used to be. (*Yellowstone County Local Civic Leader*)

Because of the in-stream needs of the fishery, and because of the way that the water laws are set up to reserve water rights, before the Big Horn comes in, in order to develop new irrigation systems, you've got to have a water right and that water is going to be junior to the needs of the fishery. Once you get past the Big Horn, and it reverses, then you can develop senior to the fisheries. (*Yellowstone County Local Civic Leader*)

B. The River as a Calling Card

Those who are interested in the future of this urban area should be interested in the calling cards to the area, one of which is the river. If you allow a few to own it, you've lost that calling card. Would it suffice for the ecosystem if it were a park? Absolutely, it would, because it's a huge area. Riverfront Park is a pretty good example. It needs a lot more extensions. You can go to many cities, Boise is a good example....and fair amounts of Missoula's Clark Fork are in public ownership....Their urban area is right on top of it....The Yellowstone is a beautiful possibility for an open wildlife corridor. (*Yellowstone County Local Civic Leader*)

I think [water] plays a huge part, especially in the growth of everything. The City of Billings and the City of Laurel both have water rights on the Yellowstone River. That is as good as gold. So that really helps. Each one of the refineries has water rights. That is why they all ended up here. So the river has played a tremendous role in the growth of Billings and Yellowstone County. (*Yellowstone County Local Civic Leader*)

[People] are also looking at the Yellowstone River more as an amenity, which is really different. It's amazing having a subdivision down near the river because for years that's where the industry was going. That's a change. (*Yellowstone County Local Civic Leader*)

It's beautiful down [by the river]. You still got your wildlife down there, and that's what people like....With Riverfront Park, people are utilizing that more. That's great. And then with the new McCall subdivision going in, I think that's going to be good. I think people are looking at it and finally realizing we've got beautiful scenery here, we should use it....Riverfront Park was a beautiful ideaIf we could do that....along different areas of the Yellowstone, I think it would be great. (*Yellowstone County Local Civic Leader*)

Industry [owners] will...be looking for quality communities to live in, and the river can be a tremendous asset for quality of life enhancement. (*Yellowstone County Local Civic Leader*)

There are two things that define Billings: the rims and the river. We've already screwed up the rims because we didn't get them into public ownership, and now [they belong only to those] who have more money than I do....When we tried to buy [some riverfront property for bike trails...one owner] refused....[He doesn't want] to let the bike trails to

go through. He's actively filling the floodway with debris so he can move his trailer park down there. Do I think that's wrong, personally? Yes. As a public official, there isn't anything I can do about it....Would I like to see organizations in this urban area recognize the strengths of the river, and allow it to be a wildlife corridor, or allow it to be something as wild and free as possible? Yes....I'm marginally pessimistic [something like that might happen]. (*Yellowstone County Local Civic Leader*)

C. Recreation

I know what the most important aspect now is agriculture, irrigation. But, I think the tourist attraction of [the river] as a natural, scenic resource will become more important over time....[Recreation] should have equal importance to agriculture. It is a tremendously diverse riparian ecosystem along the river. It has historical and cultural significance. It is beautiful. So, people will pay to come and use it, to see it, or they will consider lifestyle changes that involve the fact there is an undammed river nearby that they can appreciate and see. (*Yellowstone County Local Civic Leader*)

The fisheries issues are huge to me...[but] how far do the fisheries [issues] push into the economics? Are we willing to cut our local economy for the Pallid sturgeon? If you're from Missoula you'll have a different answer than if you're from Miles City. The problem is...the sturgeon issues and the fisheries issues are not State [issues]. Even though the state is supposed to manage these streams, the Federal government has to be part of it....It's a huge issue: State's rights verses Federal....Something's going to have to happen....Somebody's going to have to give in...if they want the sturgeon to recover. (*Yellowstone County Local Civic Leader*)

I think we have seen more recreational use of the Yellowstone River corridor...and probably will see more in the future. I know that the County has been working...[to] increase recreational possibilities. (*Yellowstone County Local Civic Leader*)

[In Huntley] we were going to put some paths in, and we wanted to incorporate the east side of the river....[We wanted to] incorporate Main Street and go around the park. We wanted to tie it all in....There are plenty of places to access [the river], but sometimes they've come and gone with ownership. [Some people] get a little wrathful about people crossing their land to get to the river, but I think...it comes down to communication. The people that want to use the river need to...ask [permission]...[and] close the gate when it's closed. (*Yellowstone County Local Civic Leader*)

With the advent of the four-wheelers, more people are able to get down in those river bottoms....A lot of times you'll hear people say, 'I'm going to Huntley to go fishing.'...They're putting in another access down by the Pompey's Pillar rock; they're building that one now. (*Yellowstone County Local Civic Leader*)

I [try to] educate people as to where fishing accesses are [near Custer], what landowners are allowing people to use their river frontage, and which ones aren't....We have two fishing accesses within eight miles....The hunters have definitely been harder on the

landowners than the fishermen. The fishermen work the banks, the hunters work the whole land....Most of our local farmers have shut their land down to hunting....You have rich hunters coming in to buy the farms. (*Yellowstone County Local Civic Leader*)

I don't think agriculture should have priority on the river. I think at best...[agriculture] should...be on par with recreation. Agriculture, you know, feels they have a right to the river, and no matter how hot the water gets, or how low it gets, they figure they got the right to what's left and to hell with the fish, to hell with everybody else, to hell with the whole living system around it. And I don't agree with that....You'll see it later this year, as the heat continuous....It will stress everything along the river...from deer to muskrats. (*Yellowstone County Local Civic Leader*)

III. Municipal Water Use

A. Taking Water, Returning Water: City Uses

[Billings takes] about 24 million gallons a day, peaking at over 50 million in the summer and down to about 15 to 16 million in the winter....We aren't even a pipsqueak compared to irrigators....We return 75 percent of it to the river [and] another 10 to 15 percent is returning to the aquifer. Ok, so we've evapotranspired 15 percent, but we've gained great things from that. (*Yellowstone County Local Civic Leader*)

[Billings has] about 33 millions gallons of total storage in the system. The city uses about 50 million gallons a day in the summer. So, you see, we don't have multiple days of storage....In the winter we do...but then you have a water quality issue. Your potability...[and] the safety component diminishes as its stored....So, we would like to have minimal storage time. (*Yellowstone County Local Civic Leader*)

[Laurel] uses a maximum of seven million gallons of water a day and our intake is designed for 20 million per day. We have good excess capacity. Informally we have talked to the City of Billings about selling them water....[Laurel has] the second water right on the [entire] Yellowstone River, so the chances of us not having water accessibility are very remote. (*Yellowstone County Local Civic Leader*)

[In Billings, we treat on] average [over] 14 million gallons per day....Approximately 20,000 pounds of solids a day come in, and we put out...maybe 400 pounds....We are removing about 95 percent of the total system solids and bio-chemical oxygen demand. The bio-chemical oxygen demand is how much oxygen it takes microbes [to] break down the waste. We want to reduce that as much as possible so it isn't taking oxygen from the river when it is discharged....The water from the wastewater plant is cleaner than [the water the City takes] out. (*Yellowstone County Local Civic Leader*)

[Billings] discharge limits are based on water quality standards of the river. We can't add anything extra to the river that could be considered toxic or detrimental. The fecal coliforms [already] in the river average around 100 colonies per 100 mils, so you wouldn't want to drink that anyway....One of the things we are looking at in the next five

to ten years is...the State of Montana further restrict[ing] our effluent limit....They are looking at the TMDL [total maximum daily load]. That is the amount of a pollutant that the river can handle. If that load for ammonia is set at 4,000 pounds a day, and it is determined that the river already has 4,000 pounds per day, then the city would be required to discharge no ammonia. Right now we discharge a lot of ammonia. That would have a big impact....It may be fairly significant. (*Yellowstone County Local Civic Leader*)

B. Safety and Quality of Water Supply

The river is not safe [for human consumption] as it is. We remove all the fine particles, all the bacteria, and the viruses that are harmful....We improve its potability in the sense of its aesthetic quality to users. It's clear, it has a good quality taste....People find it pleasant....There's lots of water that's safe drinking water but not potable. The [Yellowstone River] is a good quality source. It's a bicarbonate water. We're pretty far up the watershed. There's only a minimal amount of interference from man, but enough that it wouldn't be safe for anybody to drink as it comes down the river. (*Yellowstone County Local Civic Leader*)

Using the [river] as a waste-way is a problem....We are still fighting the past in the sense that it is a convenient sewer. That is a principal problem. We've made huge strides since the 1970s in point-source [pollution] control—huge strides. We continue to squeeze...point-sources, but we continue to neglect nonpoint-sources...such as irrigation, agricultural chemicals, suburban use of chemicals, and storm water runoff. We haven't really begun to address storm water as efficiently in urban areas as large as Billings as we should, although that is changing, too. But, we're not treating storm water runoff yet. (*Yellowstone County Local Civic Leader*)

Oil slicks [occurred in] the '60s from spills at the plants....Those don't happen anymore, [since] the Clean Water Act....We've had a water treatment system here since 1915....[Before 1915] people died every year from cholera and typhoid. They installed a treatment system in 1915 and lo-and-behold there wasn't anybody dying anymore....On the sewage side, they didn't recognize they were the contributors to their own problem. They didn't really build any kind of sewage treatment here, other than direct drains to the river...[until] '46 or '47. (*Yellowstone County Local Civic Leader*)

[In Custer] we are about to redo our whole sewer system....We do not have city water, [but] we should....The business people have to chlorinate [their water]....We've been dumping animal and human waste into this groundwater for 100 years now. These people are kidding themselves if they think it's not in their wells. (*Yellowstone County Local Civic Leader*)

C. Costs of Safe Water and Sewage Disposal

[In Billings] we're adding four filters...and renovating the remaining eight, so it's a very large project. We have to produce water at the same time, so it's a two-and-a-half year

project to incrementally bring these online....The biggest local expenditure of money is water and wastewater system. One of the biggest costs are these treatment facilities, production facilities. Just that little addition out there is 18 million dollars. Everything else, roads, that stuff, they get a lot of Federal money for that. This [addition] is right out of the local's pockets. (*Yellowstone County Local Civic Leader*)

The '97 flood forced us [in Laurel] to become more flexible....Our present day intake...is on the south side of the river and it was on the north side....And [now we] have that ability on both sides of the river....I don't know how many different times we tried to change the channel, and once the river has made its mind up, it...[doesn't] make any difference how much limestone you put in there, it's going to go where it wants to go....I believe it was right at...3.2 million to put that intake in there, so it was quite an investment. (*Yellowstone County Local Civic Leader*)

When we [put in the Laurel] water treatment plant...it was more expensive than anybody ever thought, but that is life. Companies that were involved were very understanding, specifically the refinery....We sell them raw water....Some days we had to restrict them, some days they got raw water, some days they got treated water. You can't shut something like that [plant] down very quickly. (*Yellowstone County Local Civic Leader*)

The 303(d) list is the list of impaired streams...[with] a lot of nutrient...or sediment or chlorides. [If the Yellowstone is designated] impaired...[with] ammonia, or nutrients, total nitrogen, or phosphorous, we can treat it, it will just cost more money....My goal is to maximize the tax dollar. (*Yellowstone County Local Civic Leader*)

We pressurize [the Billings water supply for] eleven different pressure zones. In order to have water as you understand it come from your tap, you need about 50 pounds per square inch. Good practice is anywhere from 40 to 80. That is all driven by terrain. There's 600 or so feet of difference across the city and if you were to pressurize the water at the upper 600 foot level to 50 pounds, down at the lower level you'd have about 300 pounds per square inch....It would skin you instead of give you a shower....Do we use a lot of energy? Yes, this [city system] is energy-intensive because we have to lift [the water]....Almost 2 million bucks in electricity a year. (*Yellowstone County Local Civic Leader*)

As that aquifer [west of Billings]...can only become more contaminated as more development sits on top of it...[and] the [irrigation] ditches are shut down because there's no agriculture anymore....If they are annexed they would have to get on the [city system]. So, there's a cost there. (*Yellowstone County Local Civic Leader*)

IV. Urban Growth—Urban Sprawl

A. A \$500 Saddle on a \$50 Horse

Urban sprawl [occurs] because people wanted to get...cheaper land....It used to be that the city...was able to zone [up to] five miles around the city. Well, the legislature struck

that down. Can't do that—can't be zoning, even though these places are going to be in the city someday and they don't meet city standards. The streets aren't the right width, they don't have sidewalks, curb, gutters, sewer, they don't have the same grade of water system piping....Then [later] the city has to annex [those areas] and assume the costs....If you happen to through those subdivisions south of Grand and west of Shiloh, you'll see that the roads have no curbs or gutters....They are very narrow little country lanes with huge homes....They were trying to sell [one home] for \$1.4 million, [and] it's got this road that doesn't meet cross sectional design requirements....People will spend \$300,000 to \$400,000 for their house...[but] their infrastructure is awful. So, it's a \$500 saddle on a \$50 horse. (*Yellowstone County Local Civic Leader*)

We made a mistake. We should have told [the developers of the subdivision] to put in an additional overlay to their plats. They put in a group of five acre lots and a group of one acre lots and the problem is that if [Laurel] ever annex[es] them it will be so expensive to put in streets and gutters they won't be able to afford it. What we should have required is you put in an additional overlay that says if this area is ever annexed those one acre lots will be divided into four lots. And your homeowner who buys the one acre has the choice of putting his house on one lot and he can sell the other three if it is annexed to pay the SID [Special Improvement District tax]. Or, he can put his house in the middle and pay the whole bill. They know that up front. (*Yellowstone County Local Civic Leader*)

One of the great natural resources that Montana has for growth and development is our air quality, our water quality, and our space. There is room for a lot of people to live in Montana. And in the high tech businesses, the computer businesses you don't have to live in LA, you don't have to be in New York. You can run businesses here. So, what we have I think, is water, air, and space....Montana has the resources to grow and accommodate. We do not have any urban sprawl. There's no such thing as urban sprawl in Montana. (*Yellowstone County Local Civic Leader*)

[Subdivisions are] a common practice in every state in the union. You have a section of land that is divided into quarters, sold off without a property division because it has a legal description. They are further divided and then they are further divided and what you end up with is somewhat piecemeal instead of planned development. However, the opposite of that is [when] government zones and plans for you. (*Yellowstone County Local Civic Leader*)

I have to say, out-of-state developers...come in, and you put a list down that [shows what] they have to do, and...to them, that's it. Our local folks are not used to doing that....We have good developers out there, and we have some that are just getting by on the skin of their teeth. That is a real problem as we deal along the river. (*Yellowstone County Local Civic Leader*)

Here in Montana, we...really don't care if there is a city park next door because we've got a little greenery in our...five-acre-tract....We are a plains culture. You don't see three story houses with huge oak trees....We have a different look, we have vistas, we are flat and wide. We are not high rise people....They bring planners from the east to tell us

how to do things, they want to stack us up downtown and make everybody believe we are all going to give up driving our automobile and move back downtown. It isn't going to happen....The market demand is for a little elbow-room....It is not a Boston, Massachusetts....If you want people to come here to live and work, they've got to have a nice place to live, nice schools, and they have to have a job....That precipitates housing, schools,...paved streets,...and so on. So I think we need to...keep protecting that that makes Montana great. Let's protect our water, protect our air, protect our space...but allow growth....There is no reason that we can't enjoy this same lifestyle with a \$250,000 house or 250,000 population. Right now, we are at a 100,000 population. What's the difference? (*Yellowstone County Local Civic Leader*)

B. Building in Flood Zones

It is appropriate to build subdivisions within viewing distance of the river but out of the flood plain....People like to live [near the river], but is also appropriate to keep park land in-between there because then you not only have the chance to enjoy the river but to protect it also. So I think we have come up with a pretty workable balance. (*Yellowstone County Local Civic Leader*)

I like the fact that for the most part [the river] is left open to function naturally, that there is still a lot of flood plain left, realizing that it's heavily armored in places....The flood plain is essentially storage for flows that are above normal flows. Without adequate storage, it would be discharged downstream and have to go somewhere and force itself into places that would probably cause a lot of destruction. So, if you can maintain natural floodplains, then you can pretty much protect property from inundation. (*Yellowstone County Local Civic Leader*)

It's still a wild running river....We like to enjoy our recreation and use the water, but it is difficult to develop up to the river's edge because it still works around. If you've ever seen an ice jam break loose, you know you wouldn't want a house or something built in the flood plain....We love the river. We use the river. Everybody likes the wildness of the river, but it's a resource that we can't build right [up] to. (*Yellowstone County Local Civic Leader*)

The river changes courses. The river as it exists today is changed significantly as far as meanders and the way it picks its course....I built a cabin on the Yellowstone River bank 60 years ago that is now an island, and this is just from the natural flow of the Yellowstone River....It's a natural thing for the river to do....and it will continue to change. (*Yellowstone County Local Civic Leader*)

There is much of the Yellowstone River from roughly Huntley east...that is in need of official flood plain mapping....Say a subdivision comes in that is near enough to a flood plain that...a 2,000 foot proximity to drainage area kicks in...If it does, then these [flood plain] stipulations enable one to determine the proper setbacks. (*Yellowstone County Local Civic Leader*)

My concern is that people don't take into account what the flood plain and floodway represent....If people build down there, we have minor floods and ice jams [in Laurel] that will potentially flood somebody's property. That is not anybody's responsibility but the homeowner's and they need to understand it....We have people sign waivers around the airport that they will not complain about the airplanes...because they have [bought land] with full knowledge that the airport is there. That is something we maybe need to look at by the river. Have them sign something that they are aware that their house could be destroyed and it is nobody's fault. (*Yellowstone County Local Civic Leader*)

We have to make sure that [people] are not allowed to build within the flood plain and that they wouldn't be putting the land to any use that would pollute the river....[We should] preserve the natural habitat. I mean, keep the man-made uses from having an impact. Sometimes rivers change their channels naturally. So you don't let people get close enough that [a change in the channel] becomes a problem. I would prefer not to use man-made methods to keep something bad from happening or to remedy something that had already happened. I mean, hopefully you can address it before it gets to that point. (*Yellowstone County Local Civic Leader*)

The non-control of sprawl along the river system, in flood zones, [is a problem]. [The river] needs to be protected in my opinion. Number one, it's a wildlife corridor, and number two, it allows the river to act as a living organism. In a sense, it is—it might migrate a little bit. Now, if you're a guy who owns a farm and you see 30 acres of your property move into the river, and your property line...is now across the other side on a sandbar, that irritates you a lot. So, you want to do something about it. But what you're doing is screwing the river downstream for somebody else. To me, that's a problem. (*Yellowstone County Local Civic Leader*)

We have a lot of resources in Yellowstone County to help us make the best decisions. We have an emergency services director and a flood plain administrator, who is the same guy. We have the flood plain all mapped out so we know where the flood area is...[and] we are even expanding that into different drainages that have floodways....First of all, you don't want the people to get flooded, and secondly it creates enormous problems for the future generations. (*Yellowstone County Local Civic Leader*)

We respect private property rights, but we also respect the fact that the river is going to flow where the river deems that it needs to go. And if you build homes in the floodway and the flood fringe, you are probably going to get wet. We saw that a few years ago....We watched Bill Keller's place, over in Custer, as the river chipped away...at the banks and then all of a sudden we watched the building fall right into the river. It is still a free-running river, the Yellowstone, and she has a mind of her own. You have to be respectful of that. You have to understand that we have many, many uses of the river, but we also have to know that if we are going to do subdivisions,...we need to make sure that people are safe and that they don't affect this river. (*Yellowstone County Local Civic Leader*)

The State of Montana has pretty rigid standards for flood plain development. And most, but not all, of the counties along the Yellowstone are active participants in the flood plain management program. That means that [most counties follow] the regulations that the State puts out. The model regulations basically restrict development to generally agricultural purposes, or other uses that don't require permanent structures....For the most part [the model is] making sure that the flood plain isn't altered, not filled or re-graded, or things like that. (*Yellowstone County Local Civic Leader*)

We're lucky that we had a 100-year flood along the Yellowstone back in '97 and '98.... There were photos taken at that time, so the photos help substantiate where the [flood] boundaries were. That is allowable evidence when trying to determine where a flood plain is. You can use historical records...water lines...[and] anecdotal stories about where the flood was. In this case, we've got pretty good evidence of where it was....It's useful to use the photos. Many of the maps were created in the '70s and '80s, and there hadn't been a 100-year flood....Also, the river has shifted quite a bit. The Yellowstone is a typical graded stream, it really is a very dynamic stream [that] can shift quite a bit, and it has. (*Yellowstone County Local Civic Leader*)

I anticipate that the flood plain maps and disaster insurance is going to be a big issue in the next few years. Especially in view of what happened in the last couple of years in the Gulf Coast and Florida. (*Yellowstone County Local Civic Leader*)

Most officials and residents are trying to maintain a corridor on both sides of the river, for the aesthetic value and free-flowing [river]. So you really can't be building down on that flood plain. But we are getting very close....[We try to maintain] a buffer zone to keep commercial and residential development from off the river. The river is a wild river and, if we can maintain a...100-year flood plain without permanent structures or that kind of stuff, we are in good shape. (*Yellowstone County Local Civic Leader*)

C. Septic Systems and Sewage

[Outside of the city water system, we have some areas with septic systems in] pretty shallow gravel....[And] on the bottom is shale, which is not porous. So the water...just moves down the gravitational gradient....You sink in your well...[and your water has] lots of minerals in it....It tastes like shit. You end up putting in a reverse osmosis system to get the minerals out:...[the] high calcium, high magnesium, high sulfate, and lots of nitrates. Nitrates are causing problems for Blue Baby Syndrome. About 10 mg per liter of nitrates in water is associated with babies [who are] unable to take up oxygen. So, that's a problem if you were to drink water...above 10 mg per liter, and there are areas like that out there. They need to be urbanized; they need to be put on a water system. (*Yellowstone County Local Civic Leader*)

There's a lot of issues with subdivisions....Look at how we look at drain fields on the septic systems. You have places where the groundwater table and the septic system are mixing, but,...mathematically, it doesn't appear to be an issue. See, the problem is this subdivision may not be an issue, but what about [adding] the one above it? Now there's

72 houses above in this aquifer...but the assessment was done here [on one subdivision]...This is decided and this is decided [separately]. We never go like this [and look at all of the subdivisions together]. (*Yellowstone County Local Civic Leader*)

There is more pollution from agricultural animals and fertilizers and nitrates than there ever will be from people. Now, there...[are] a few examples where they put a lot of septic tanks in near an aquifer and we had some problems. Years ago, there used to be a place out in the Heights [and]...I think those people had cess pools....But now with the various systems that we have, the water, if given the proper zone, filters out and doesn't present a health hazard. As long as you have a septic tank in the area of one acre. In other words, if you have room enough for your drain field, I don't anticipate that is going to be a problem. There were some [other] examples in western Montana...[but,] of course, western Montana has a [more] lot...water than we do so it is a lot easier for them to contaminate an aquifer than it is here. Some of our aquifers are down 60 to 70 feet. Your septic just isn't going to contaminate that; it just isn't. (*Yellowstone County Local Civic Leader*)

These guys were here this morning...[concerning] a piece of private property out in Lockwood [near] the river. He received a permit to build a cold storage without a restroom. Now he comes back and says, 'You know I need a restroom.' We are denying it. He is into the flood plain, and his permit was clear. It identified that you're in a flood plain, and you cannot build a sanitary system there. The statutes don't allow that so he is not going to get a variance. (*Yellowstone County Local Civic Leader*)

D. Preserving the River, Local Farms and Public Greenways

Most agricultural operations near the Yellowstone River utilize the river for their livelihood. They depend on it for their water supply. I think there's a link between economic viability of agricultural property and [other] land uses...The tough thing is for our agricultural entity to survive—most likely it will change into some other land use. (*Yellowstone County Local Civic Leader*)

You look at these subdivisions, one on top of the other on the west end. I wish that there...[were] public dollars that could buy out all the development of those farms—just say, 'This is a farm.' And then it's only worth farmland values because you can never develop it. There's programs out there but no funding to speak of. (*Yellowstone County Local Civic Leader*)

When you talk about corridors...it is quality of life issues....I've always...felt like there has to be more to planning than just deciding which subdivision goes where....A good use of public dollars: if there was some very prime irrigated ground...buy that development out of it. [Then,]...if I come in and buy [out] that...development potential,...buy conservation easements on those places. The problem right now [is that] the conservation easements are all dealing with trout streams and elk habitat, not raccoon and whitetail habitat so to speak. It would be great if there were a corridor there and subdivisions weren't in there. (*Yellowstone County Local Civic Leader*)

Riverfront Park is a good example. The area that they developed was kind of the corridor area....There's places along the corridor where it's fairly narrow, but there are places where it's nearly a half a mile wide....I think you look at the wildlife population and the things that are going on there. You look where hayfields have developed and stuff like that. The corridor is generally fairly undisturbed....It's not a good area to develop....Generally it's the cottonwood area along the Yellowstone and the low lying areas. And in places that's not very wide. [In] other places it's real wide. (*Yellowstone County Local Civic Leader*)

I agree with the [idea of a] corridor....I mean it keeps the quality of life where it is....There's something about walking down the road smelling a fresh cut alfalfa field. I've seen the corn field out there and watched a raccoon go into it, or a deer go by. That's just something that you want your kids to experience, just like you get to. The beet industry up and down the river, the smell of just all that, that's all a part of the quality of life. (*Yellowstone County Local Civic Leader*)

One [problem] is...you don't have to have park dedication if you do a minor subdivision. [So, people would] get that approved take a breath. Do another minor subdivision, take a breath. Pretty soon you have done a major subdivision with no park dedication. You have done a major subdivision as one minor [subdivision] at a time....That was the case in Yellowstone County...but [with] our new subdivision regulations....[a] second minor [subdivision] will be a major. That is a hole that we have found....I hope [the new regulation] sticks, because it will probably be challenged by a land owner. (*Yellowstone County Local Civic Leader*)

We have supported the Yellowstone River and Parks Association and looking at the trail process through Yellowstone County....We recognize the river greenway and how important it is. We are starting to see subdivisions pop up that are using that as selling points....We have Riverfront Park and have worked with the County Parks Association....Our whole trail project of trying to intertwine the city and the trails along the river....We may not have perfected it like Great Falls. (*Yellowstone County Local Civic Leader*)

[According to our] subdivision [rules], you have to do a little bit of park land. It's one of the city/county regulations...like seven or six percent....I think it has to be public of some sort. The problem is that we have all these parks all over the place and nobody maintains it. You go out to Lockwood and look at a subdivision, [and] there's park land authorized....The problem is nobody knows about it and nobody maintains it. So it sits out there, three [or] four acres in the middle of a subdivision....That's how it is. (*Yellowstone County Local Civic Leader*)

[In] that new subdivision...there's a wildlife area [near the river]....It'd be nice to walk from your house and go down there and be able to still have the river intact. And take your kids to walk down there...rather than developing all the way to the edge of the river...[and] it's going to end up...public because it joins other public access. (*Yellowstone County Local Civic Leader*)

I think that you have to be there quite a while before you realize... ‘Where’d the deer go? What happened to that hayfield that was down there. Now it’s a car dealer’... Driving from here to Laurel, it is getting harder to see any farming... and it’s getting to be more things right along the road... more developed. And some of those guys are my friends. (*Yellowstone County Local Civic Leader*)

The experience of floating the river changes dramatically if you have houses on both sides of the river. Right down at the river... How do we encourage understanding that there is the possibility of losing that... [and of losing] the culture of Montana?... If we are not careful, that’s what is going to disappear on us. The reason everybody wants to be here is the thing that is threatened by them wanting to be here. How can we articulate that? (*Yellowstone County Local Civic Leader*)

E. Planning Boards

[As a planning board] we are sitting there looking at the overall growth plan: what would be ideal?... [How should we] use our infrastructure the best? Our water? Sewer?... We... develop a master plan which is for guidance only.... Then somebody comes in and says, ‘Okay, I want to build a rural subdivision, and I want to have 50 houses on one or two or three acre tracks.’ We review that.... That’s our main role, to be a citizen review board, and then we pass our recommendations on to the city, if it is in their jurisdiction, or the County, if it is in their jurisdiction. The elected officials make the final decision. (*Yellowstone County Local Civic Leader*)

[Landowners] do not have the right to... do anything they want.... [In one] situation, where [a fellow wanted] a subdivision,... [there was a] big petroglyph on the site... [and this] conservative planning board... [was] saying, ‘The guy owns the land and he should be able to do what he wants with it.’ Now, wait a minute.... This is a cultural resource. It belongs to all of us.... [We can] force this guy to do a cultural resource inventory, which would be really expensive.... But, [he can also] register this site with the State Historical Society and... put a deed restriction on the lot. (*Yellowstone County Local Civic Leader*)

I’m one of only three non-realtors on the planning board, out of ten. So I come to the table with a whole different idea of what planning should be. You look at the old flood plain maps and there’s a lot of leeway in them.... If you’re building an irrigation system, then we should talk.... If you’re that young couple, that bought that house and you don’t understand the issues, it’s going to hurt you a lot more than that developer who maybe should have thought about it before he put in that subdivision.... The problem [with realtors on the planning board] is that they are out there making a living [by] selling property.... I don’t blame them... but I think [the planning process] is more of a public issue. What’s our policy going to be? What do we want to do? Then [the developers have to] follow the policies.... I think it’s beyond a realtor. (*Yellowstone County Local Civic Leader*)

V. Pressures on the River Character and Water Quality

A. Rip-rap and Channelization

The natural processes of the river [include] erosion and deposition....I understand why [people who live near the river] would [want to stop erosion], but from a geologic or scientific viewpoint, once someone affects one part of the river it will affect another part of the river. There are consequences....If you put in...rip-rap then that may cause scouring in some places and deposition in others. You may be affecting your neighbors....Those types of things need to be considered....I think it is important to approach this from the scientific point of view. (*Yellowstone County Local Civic Leader*)

I would like to see more of the original river come back. The meanderings, the flooding, the islands, get rid of the rip-rap, that kind of thing. I'd like to see that come back. I don't think that would impinge a lot on industry...but at the same time I realize it is a complex issue trying to tell somebody he can't rip-rap his 100 acres....But this isn't rocket science, but I mean, this stuff can be worked out; some sort of compensation can be set up....You have to do that. That's part of working together to get something done. (*Yellowstone County Local Civic Leader*)

The erosion issue is a tough issue....Are we going to armor the whole [river]?...What's the right thing to do if it's your 100-acre farm that you're going to lose?...If you look at the old maps,...that river moves....If I was a landowner along-side of [the river,] erosion would be a huge issue for me....If you're the City of Billings and it's at your intake for your water system, rip-rapping near that might be a pretty important issue. Where do we go with that?...I'm sure that armoring the whole river is probably not the answer, because if you armor one spot, that force is going somewhere, somebody else is going to deal with that. (*Yellowstone County Local Civic Leader*)

We used to just push cars in the river. I remember along the Milk River....What an ugly sight, but it worked. There were places they'd have half a mile of cars piled up, just push them off into the river for rip-rap. They were allowed to do that at that time. They're all gone now. (*Yellowstone County Local Civic Leader*)

Even in Yellowstone County, we have a lot of extreme bank armoring. You can see it in very site-specific areas where the armoring has caused erosion just right downstream from it. The velocity increases where the bank is armored and you get swirls and eddies downstream that cut into the bank....On a site by site case you can see evidence of how armoring really does change the dynamics downstream. It's not [only] development; it may just be a farmer trying to save his field. It doesn't have to be a subdivision, housing development. (*Yellowstone County Local Civic Leader*)

If you stabilize the bank in one area and...don't really do a good hydraulic evaluation, you're going to erode something downstream. The river has to dissipate energy, and it's going to dissipate it by eroding the next guy's bank. If you graze off all of the riparian plants along the river, you're going to have a whole lot more sediment...than if you had

good turf, trees, and all things that attenuate flood flows and that don't allow a channel to migrate as rapidly. (*Yellowstone County Local Civic Leader*)

Channelization is a problem because the river loses its ability to cleanse itself, it increases flooding, it does a lot of things in the long run that could be disadvantageous to a system like this....A river that no longer has any of its own storm controls—oxbows and a nice riparian zone—doesn't attenuate extremes....Rip-rap destroys the river environment, and, from an outdoorsman perspective, it's awful....It channelizes the river, it moves the flood...events down the river. I think there are points on the river where you have to [protect the banks] because of our historical practice of locating facilities that are almost impossible to move. If I had my druthers, would I druther those refineries were away from the river? Yeah. But we can't move them today. (*Yellowstone County Local Civic Leader*)

I've seen a lot of different things. In my mind, the rip-rap is the worst that there is because it just protects the bank at that location. Generally, it gets eroded behind it. You see those old rip-rap trails in the middle of the river eventually. I've seen the river barbs that come out and they're oriented upstream, and basically it diverts the flow away from the bank. These are navigable. You can still go over them in low flows or avoid them in low flows. They don't go across the river. (*Yellowstone County Local Civic Leader*)

[At the Billings water treatment plant] we do have plans to build up the access road and do some rip-rap and get that up higher than the 500-year flood plain. They are looking at...raising the road up a couple of feet. I don't know when or if that will happen....As far as somebody that uses the river a lot, the element of the banks is an issue. It does create some good fishing holes but it also increases the velocity and channelizes the stream....They have [also] channelized the river a lot at the water plant to make it deep enough to get [City] water. They channelize big time to try and keep it deep enough....Laurel has done the same thing. (*Yellowstone County Local Civic Leader*)

B. Billings Turned Its Back on the River

I think Billings is really lucky to have the Yellowstone flow through it. Unfortunately, Billings turned its back on the river and lost sight of its value. Consequently, we get a lot of bad development down by the river. It's almost like throwaway land....In some cases development is good if...it reorients us to understanding the value [of the river]....We've allowed our industries to be along the river....I see a lot of waste and bad development occur along the river....It's almost plighted. (*Yellowstone County Local Civic Leader*)

When I was a little kid,...our landfill dump was down on the other side of Conoco, where Midland packing used to be—that's where our landfill used to be....That's where the garbage went, and....we would bulldoze it to the river. That's why there's so much debris....When people [went] down there and they started the bike path through there, they couldn't believe the junk that was in there. But we bulldozed that for years down there, and that's where all the junk went. (*Yellowstone County Local Civic Leader*)

We...need to take advantage of the aesthetics of the river, because now there is just junk down there...and there's a refinery on one side, and then the treatment plant, and then a trailer court....You would think that would be prime real estate. (*Yellowstone County Local Civic Leader*)

[The river] is kind of an anchor for Billings...that doesn't get seen very often, or appreciated....If you develop it, you try to work with it and try to use it as a natural system rather than trying to control it [or] channel it....[Focus] more on developing compatibility with natural resource systems rather than trying to control them....We've gone beyond that age....Those rivers were here a long time before we were, and they did just fine....We don't...spend enough effort thinking about that end of it....That guy who built those artificial islands, did you see that? Wasn't that cool? Wow, that was a neat deal. (*Yellowstone County Local Civic Leader*)

I'm always looking at things how we should be able to improve our community, and I think utilizing the river to me would be one of them....Down in Santa Fe...[and] in the Laughlin, Nevada, you can walk the river[s]....But in Billings, we seem to shy away from the river....I think we ought to utilize the river because it's so beautiful....I think we should probably be...promoting use along the Yellowstone River....either [with] more bike paths or trails along the Yellowstone....I don't think we would let people build right on top of the river....Basically learning from Santa Fe and Laughlin....If we could do something like that here, I think it would be well worth it if our economic development program [would] look at stuff like that. (*Yellowstone County Local Civic Leader*)

C. Industrial Threats

Thermo-loading back to the river is a problem....That is cooling water that is taken out, like...at the refineries, [for] they're cooling water. That water is returned to the river. It changes the thermal characteristics of the river, so it's thermo-loading. They have some pretty tight controls. (*Yellowstone County Local Civic Leader*)

The further that there is a buffer zone from any other user of any substance, the better off for the city....Industrial facilities right on the bank of the river are an awful thought to me. (*Yellowstone County Local Civic Leader*)

When Midland Packing used to be down there,...they would dump everything down into the river....Nowadays...it's improved....I think we should still pursue that....With the refineries, I think they should be watched more closely. I know with the oil spills that we had four or five months ago, they never did find out where that one came from....Nobody admitted to it....There has been a lot of improvement, [but] I think we can do more. (*Yellowstone County Local Civic Leader*)

There are some...man-made chemicals that are probably added because of ignorant use by people in urban areas, things like...prescriptions [that are] put it in the toilet and flushed down the drain. Worst possible thing you can do. A lot of those things we can't

treat, so it goes right into the river system. That needs to go into a landfill or it needs to be disposed of in a hazardous waste landfill. (*Yellowstone County Local Civic Leader*)

The pharmaceuticals and other things are considered emerging contaminants and it is something that is being investigated now. Efficiently run treatment plants remove 99 percent of the pharmaceutical drugs. It is not only what is flushed but what is passed through people. The one percent they [find in streams] they are thinking is still enough to affect aquatic organisms. Not enough to affect humans. It is down below parts per trillion. (*Yellowstone County Local Civic Leader*)

I think we would have to watch so that our rivers are not polluted,...but I think they ought to be utilized, I really do. I think we should be able to develop something, even if it were away from the river. (*Yellowstone County Local Civic Leader*)

D. Noxious Weeds

The only other issue that's the big one is the noxious weeds....There's just about every horrible weed you can find on the Yellowstone....I don't know how it got started, but it definitely goes down the river. If you just go on the riverbanks and look, that salt cedar is just about everywhere now. We can't hardly go anywhere without seeing leafy spurge and...it's a very competitive plant. It'll take a field over....You can't just kill...knapweed and spurge....I can only imagine if we don't get a handle on that how that will look in ten years....Salt cedar is an issue we used to only talk about around Sidney. Now...it's all over the Big Horn. (*Yellowstone County Local Civic Leader*)

It's a big deal, and I think it's in the public interest to fix those sorts of problems. The landowner is important but the [is] public too....We do have some spraying programs [for noxious weeds]...but it's a lot bigger than the little bit of funding we put out there right now. And it's in the public's interest, not just the landowner's interest, to take care of that. Just in Yellowstone County, I can't even imagine to effectively spray those areas, what would that cost. I can't even imagine. Millions and millions of dollars, I'll bet. It's expensive. You don't spray that real easily. You can't just spray it once and control it. You can be years down the road, ten years down the road before you can fix it. (*Yellowstone County Local Civic Leader*)

VI. Comments on Agriculture

A. Agricultural Uses and Water Supplies

Even irrigation is not a consumptive use of water, other than the evapotranspiration....[In the] water cycle your evapotransporting is going up, and raining back down. Water is neither created nor destroyed. (*Yellowstone County Local Civic Leader*)

I've got land and we raise cows...but, you know, I even question sometimes flood irrigating. It isn't the most efficient use of water. They've shown that sprinkler systems are a more efficient use of water, so they have less runoff, and waste and

fertilizers...hailed down....In some states, the amount of surface water has been reduced such that you can't afford to keep flood irrigating. There will be some issues like that in Montana, I'm sure. (*Yellowstone County Local Civic Leader*)

Right now we're converting a lot of flood [irrigation systems] to pivots [systems]. So we're reducing the amount of usage, but then again, we are adding acres. So we are spreading water and using it more effectively, but probably not gaining a whole lot to the stream. (*Yellowstone County Local Civic Leader*)

Irrigation, more so than municipal use, has changed the river....The river flows less in the late-spring than it did historically because of irrigation withdrawals. It floods more in the winter because of base load return, because, when irrigation is charging the alluvial aquifers, the aquifers sustain the river in low flows. Without that irrigation, the river would certainly run in greater extremes, both on the top and on the bottom. That is good under some conditions for flushing flows. It is bad in others when it dries up. You hear a lot of rhetoric and a lot of discussion about water uses. A lot of it I believe is totally uninformed. (*Yellowstone County Local Civic Leader*)

Irrigation is a problem if [the river] is over-appropriated and dries up midstream flows. It is not a problem if it creates a larger riparian zone, which it has done. The abundance of life is huge compared to what it was previously. (*Yellowstone County Local Civic Leader*)

Agriculture is clearly a commercial use. Historically, everybody tries to say, you can do anything you want in agriculture as long as it is agriculture related....But if you view it as a commercial use, then when a residence comes in there, you've got [to] look for a compatibility between commercial use and residences....We have a lot of subdivisions on the west end, and out east too, where the people say, 'Well, this isn't commercial use, this is Ag use.' A feed lot is a commercial venture. And it has an effect on the neighborhood. I get a little irritated sometimes with people who get the idea that we have got residential development, commercial development, industrial development. And then they act like agriculture is sitting up there as some sanctimonious outfit that can do anything they want, when in fact,...if you put a hog operation right down on Big Horn River, like they did, you...[get] pollution issues....Agriculture, just like any other business, has to be accountable when it comes to our water. (*Yellowstone County Local Civic Leader*)

B. Agricultural Practices and Water Quality

We are seeing such a change in philosophy even in the farm and ranch community about riparian areas. Everyone used to just perimeter fence their cows; you have a mile square section or half a mile depending on whatever land you own. And now they are starting to fence the riparian areas out so the cows don't trample through the brush and that natural filtering system. That is kind of a farm management thing that is good for the environment. (*Yellowstone County Local Civic Leader*)

Bank erosion today is caused by inappropriate use of the riparian zone, primarily....It's a trade off: do you want to have your cows and calves down in the river under the trees or do you want to take care of them somewhere else? Well, the old-style method was down along the river. Well, they trampled the shit out of everything. The Yellowstone is a big river, so you don't see it as much as you see it on the side channels. The Clarks Fork is awful. It creates nothing but trouble for us because of sediment coming down. It's a very erodeable country....it erodes something fierce. [And] it's got years of that sediment built up right in the flood channel. So, even if you were to correct it today, it will continue to move that stuff forever. (*Yellowstone County Local Civic Leader*)

Irrigation wasteways return sediment to the river, that's a problem for me....Typically, wasteways bring a lot of sediment back. That's where excess water in a canal system can be dumped back into the rivers. When you do a lot of flood irrigation, often that water will collect and drain...back to the river....That's okay, except that it's usually carrying lots of sediment, which is washing away your topsoil and it's also putting sediment in the river, so you're changing the quality of the river ecosystem. The higher sediments change the types of creatures that can live in the water. (*Yellowstone County Local Civic Leader*)

Number one is agricultural chemical runoff...that's a huge use. Chemicals either leach from the soils, and get into the alluvial aquifer....The river is a huge dilution source, relative to the concentration....Aquifers move in inches and feet per year, versus feet per second like a river. So [water] moving back into the river [from the aquifer] is a very slow process. Something you did years ago may [appear] later. (*Yellowstone County Local Civic Leader*)

Something that is really brewing is the run-off from agriculture operations, be it herbicides or animal waste. Getting down into the river this will be treated as a pollutant and you have to have all retained on-site. I don't know how you are going to do that. If I spray my field for aphids and I flood irrigate and some of the herbicides gets into the waterways and ends back into the river. Or my cow craps in the field and it runs off. I mean, there are some problems. (*Yellowstone County Local Civic Leader*)

The agricultural communities are learning about that [run-off] and they are finding out that with flood irrigation and you have a little riparian area that has natural weeds and stuff to filter that wastewater back into the river, you filter most of that stuff out. Not all of it, but there are solutions. (*Yellowstone County Local Civic Leader*)

I've got to credit agriculture....Most people make sure that they [don't] overgraze and,...for the most part the responsible people have tried to be good stewards of the lands as far as grazing and vegetation and the creek beds....The long-time, old-time farmers and ranchers...did a pretty good job. (*Yellowstone County Local Civic Leader*)

C. Agriculture's Potential Allies

A lot of times I don't even understand how agriculture and recreation have any issues with one another. They both want water storage....There are fights and [then] there's a lot

of perceived problems....The Pallid sturgeon is a good example of a conflict. It's going to cost somebody a pile of money to pass those fish up and down the river from the different diversion structures....I tried to explain to [the agricultural community] that 'You need to listen to the Feds on this deal....It doesn't cost you anything, and you get your diversion structure rebuilt, which is in horrible shape. The fish get to pass around it, and you still get everything you want. You best be looking that direction. There will come a point where you will pay for that structure and that fish passage issue will be added to your bill. If you don't want that then you need to be at this discussion [and say] that's an appropriate use of Federal dollars.' An environmental community will agree with that. The Ag-recreation deal is just absurd, really....The recreationalists on that river don't really hurt anybody, and the Ag guys...there shouldn't be an issue there. They both, the recreationalist and the environmentalist, want the Ag guy out there. (*Yellowstone County Local Civic Leader*)

Once I explained... 'Hey this fishery is the best thing that could happen to you....You're downstream of the need to have 2000 CFS in the [Big Horn River] for the fishery. So, don't cuss at those trout, because that's the best thing you could have. Now you've got the fishery people on your side....They don't care that much whether you're taking the water as long as it gets past Two Leggings [drainage]—the end of the blue ribbon stretch is in there.' And once they figure that out, they liked that idea. (*Yellowstone County Local Civic Leader*)

One of the problems the Yellowstone has, and I struggle with it everyday, is our ideal in the Ag economy....The Yellowstone has a diminishing population base in the rural areas....You go to Sidney, you go to Glendive, [and] the oil industry has helped. But that's a superficial expansion....where the oil industry comes in. They drill some wells and do really well for awhile, and then it goes to heck....My issue is the economy....Not lately, but we've seen a lot of money-guys come in and buy ranches along the Yellowstone. That continues to happen from time to time. It changes the whole dynamic....The rural economy is in tough, tough shape. The ranches are getting bigger, the farms are getting bigger, [and there are] less people....A professor from Harvard came in—this was about 20 years ago—he came in and said...we should...turn Montana back into a buffalo pasture. Made a lot of us mad. But up by Malta they put in one of these buffalo pastures, and there's getting to be a lot of buffalo....He said that's the best use of this country. I hope he's not right. (*Yellowstone County Local Civic Leader*)

VII. Stewardship and Complications in Managing Public Resources

A. Stewardship and Property Rights in Public Policies

I don't feel the river is broken in any way, so I don't see it needing any fixing, as long as communities along the way aren't polluting the dang thing....That's the only way I could see that it would need any more control. (*Yellowstone County Local Civic Leader*)

We all take for granted the Yellowstone River...and we can't do that any more. The value of the river is that...she's kind of a spiritual entity....The whole basis for the existence of life here. If we didn't have that river here, where would we be?...The right of the river to exist in a natural environment is a priority....It benefits us as a place that people want to live, as a place people want to visit. It's a place that enhances our sense of ourselves. It kind of blesses; it enhances. (*Yellowstone County Local Civic Leader*)

A huge percentage of...people are good stewards. Then there's this percentage that aren't....[Good stewards] leave it the way you found it. The next generation needs to use it too....We're not very good at next-generation thinking. I'm not sure we ever were....We haven't made the philosophical change to that thinking yet....I'm a believer in wise use, and I don't think we've defined wise use. It's not merely conservation; its wise use. (*Yellowstone County Local Civic Leader*)

If one takes a look at where we were in the '50s and '60s, and where we are today, one would have to say that there's no need for pessimism....Have we done enough? Probably not. But it would be unbelievable if we hadn't done anything. Even here, it would be unbelievable. If private property rights were totally valid and you could do anything you wanted to do, it would be pretty awful. (*Yellowstone County Local Civic Leader*)

Guess who the property owner is in all of these [public] green ways? You and I. We have property rights and we support those property rights. (*Yellowstone County Local Civic Leader*)

Waterways are public....[Unfortunately,] the closer people are to the river, the more they feel it's theirs and they put up barriers for recreationists....At least in the navigable waters,...setbacks should be required. (*Yellowstone County Local Civic Leader*)

The increase in population pressure never stops....We need to find a way to protect the river assets because there is getting to be more and more and more of us. And we all want a piece of the river for our own private purposes and...you can't do that. I think we need to do some planning on the river before you destroy what you love....By taking a look and starting to appreciate...what a tremendous resource the river is....You have to look at use options and priority settings and water rights. And I think you have to work together with agriculture, and recreation, and industry. I don't like to see the either/or options being thrown around. No one ever benefits by that. I guess that is what I mean about planning. (*Yellowstone County Local Civic Leader*)

They say once you hit [a population of] 100,000 that the next 100,000 comes twice as fast....We'll see. We've had about two to three percent growth a year, which is not like...Bozeman and Belgrade, [and] Kalispell...[where growth is] seven to eight percent [and] you just can't keep up with it....I anticipate that Billings will continue to grow at about three percent and so that will require increased use of the water and, of course, more streets and sewage and sewer and gutter and all that kind of stuff. (*Yellowstone County Local Civic Leader*)

Priorities probably should be in health and safety. But we're...trying to finagle what we have...instead of trying to conserve....Our priorities should shift to a more conservative attitude as far as water usage. And then maybe the question wouldn't be so hard as to whether it's going to be Ag or human consumption....You do that through a variety of means that could support a natural system as well as provide for drinking and agricultural water. We waste so much water through those ditches it just drives me nuts. The leakage of the ditches and evaporation from them—there's got to be a better system than that. Yet, it's contributed to our groundwater and that's something people rely on.
(*Yellowstone County Local Civic Leader*)

The river corridor is like the whole valley. In places, the Yellowstone River valley is miles wide. The river is actually maybe 600 to 700 feet wide, but there's from hills to bluffs on both sides; it's pretty extensive....You have to be careful, I think, so wherever little creeks that drain into it, and we need to be careful not to impede those....There's things that could be done towards the outskirts of the corridor that are definitely going to affect the river. (*Yellowstone County Local Civic Leader*)

You can't say, 'That guy is a good guy; he's my buddy. His ranch is right next to mine, and he wants this diversion....Ok, he can do that.' (*Yellowstone County Local Civic Leader*)

There is a conflict between private ownership and access...[but] somehow the public has to have access....The public should have the right to walk the banks of any stream or river....The conflict that will probably never be resolved in some situations...[but] I wish there was a way that could be ironed out because I think the public, more and more, is being denied access to rivers and streams and mountains. I would be an advocate for the public's right to enter those. (*Yellowstone County Local Civic Leader*)

Bureaucracy is a tool that you can either use to your advantage or a disadvantage. The fellow that [complains] probably doesn't realize the benefit he's getting from these layers of bureaucracy....You have to have a goal...and be able to...see the pieces of the puzzle....Then move forward. If you're too hesitant to move forward, people along the side of the road are going to grab you and take you away from your goal. Then...you have to step back and evaluate because maybe you don't really understand your goal....The general rule, I believe, is that [bureaucracy] serves the purpose for which it was intended—it serves the people. (*Yellowstone County Local Civic Leader*)

B. Tensions Between Agencies' Missions and Governing Entities

Now, we are very fortunate in Montana that those major rivers supply a tremendous amount of water....The State of Montana...owns the water. And the thing that bothers me most...is the Federal government and the Corps of Engineers and their control over our water. They [can] demand water...downstream...[to] float barges in the Mississippi....That is always bothersome to us. (*Yellowstone County Local Civic Leader*)

You have the Fish, Wildlife and Parks with the mission of access....Then you have....the road department that tells the private owner that if you give me a right-a-way, we will fence it and keep the public off your property....Down by Duck Creek...you have a river...a private property owner and...you have a bridge. [The area by the river] is all within the high water mark so [the public] can [be] down there...[but] to get down there, people do what? They drive down,...violating this guy's right....because the State said, 'If you give me my road right-a-way through here, I'll fence it.' So [the State ran the] fence...up to the bridge [and] the public can't get from this public right-a-way to this public right-a-way without climbing over the fence. [So] they cut the fence....There are solutions:...pedestrian gates through there, and better enforcement by Fish, Wildlife and Parks. They often will open an area up but they count on the Sheriff's Department or somebody else to put out the bonfires and the keggars....[This] is a State issue....They sign those agreements for 'highway uses only'....Quite honestly,...you need to provide adequate access where you can because [the river] is a public resource. (*Yellowstone County Local Civic Leader*)

The cities can annex wherever they damn-well want....We [ended up with a] roadway between two subdivisions and they are in the City of Billings [now]. It was just asinine! So we passed a law that they have to take the roadways along with [the subdivisions] and [the cities] have to maintain them. (*Yellowstone County Local Civic Leader*)

The other thing which Billings hasn't done, but I think it should,...is annex [the land between the City and the river]....The land from Garden Avenue to the river is County, and it's all septic....If you...are trying to get them on to a sewer system, the only way you can do that is annex them. What we're going to try and do is focus a planning effort down along that corridor and talk to the people....Their systems [are old and] will be failing...and they'll need to make that decision: Do they want to annex and get sewer, or do they want to replace [their septic systems]?...So, it's a good time to get in there and show them the benefits of getting on sewer....The City can't force annexation, but we sure would encourage it. It's expensive for people to...get hooked up to sewer [after the fact]....[Where we have annexed] we're playing catch-up,...which is why I say [that area] is plighted. It hasn't really reached its best development potential. (*Yellowstone County Local Civic Leader*)

With regard to development, the State ties your hands in some regards. And the worst regard...is that water issues don't need to be addressed under subdivision....We had a subdivision here and it barely has enough water for itself because it is outside of the City of Laurel. If a sub-divider comes in and says he will build a subdivision right here, and the next one comes in and builds here, at what point can we say, 'You can't do this because then [the people in the first subdivision] don't have water.' We can't do that because the State won't allow it....The link to the Yellowstone River is [that] they will eventually say, 'Please annex this and get us water'....We let a subdivision build in that same type of situation...[but] we did require them to put in ponds to recharge the ground for the subdivision below them. (*Yellowstone County Local Civic Leader*)

C. *The Complications of Setbacks and Corridors*

I believe that there needs to be corridors....Not only to protect the river itself but [also] the wildlife systems that are in that river. I would love to see public funding in some of those issues. That is kind of wild for me to say considering I come from a Republican background. (*Yellowstone County Local Civic Leader*)

[In the] last few years people are talking about a numerical setback of, say, 300 feet....In some cases that would be sufficient, in some cases it would not....Those things are best viewed [by] scientific data, elevation data, [and] topographic data that is accurate enough to determine what the 100-year flood plain levels are....[If the scientific data] sets up a duel type of a regulation that [will be] confusing to people....It is important to have those flood plains and floodways delineated so that when the river is at high stages it doesn't do the tremendous amount of damage that it can. (*Yellowstone County Local Civic Leader*)

[With] our zoning regulations, we also have a setback from water courses required. Unfortunately, it's only 50 feet from the center line....You'd have to study it. I've seen counties that have had up to 300 feet, and that could be severe. I don't know if there is one size that fits all...[but] bigger setbacks are getting to be more common, and those are good practices. (*Yellowstone County Local Civic Leader*)

Do you want me to come in and tell you what you can do with your 160 acres? And what if that is where you put all our resources...and your plan ultimately was to...pay for your retirement. Then along comes the government and says now we are going to make this a riparian area. This is a green space and you can't develop that. I have just wiped out your assets. The government has to be careful that controls don't go overboard...[and] start infringing on private development rights. (*Yellowstone County Local Civic Leader*)

[In] a new set of subdivision releases,...for the first time in Stillwater Country, setbacks from the river are going to be a consideration....[The requirement] didn't say you have to be 50 feet back—it doesn't work. However, if [the subdivision is] in an ecologically sensitive environment, [a setback can be] a requirement, which is a major step forward for a conservative county. So that was cool. (*Yellowstone County Local Civic Leader*)

The opposition will be out there....It's because you don't look beyond the fact it's my property and you can't tell me what to do with it. Public policy can't tell me what to do with it. Now, he might be the same guy that would sell a conservation reserve on that property voluntarily, but if you said, 'We on the Yellowstone are going to make this policy,'...it's just—I don't know what to call it...[It the] It's-my-property-and-you-can't-tell-me-what-to-do-with-it mentality. I don't know what to call it. I know it's out there. I've seen it all the time. (*Yellowstone County Local Civic Leader*)

Politically, whether you can define [a setback] depends on who has the juice and where they're located. We're humans and politics rules sadly sometimes. (*Yellowstone County Local Civic Leader*)

I would be very much in favor of [a] setback....It's dangerous [to build near the river]....It's an obstruction to a natural river. And what happens when you start building along that river is you've got to protect them. And now you're forced with making decisions that are contrary to the natural flow of the river. So I think that setback should be in effect. I don't know what that number would be, but it needs to be out of the way, that's what I think. And that is regardless of ownership. It's just it should be a building restriction on how close you can get to that river. (*Yellowstone County Local Civic Leader*)

You know, the Constitution of the United States, with its Bill of Rights, as well as the Montana Constitution, absolutely lists as an inalienable right your right to property, both personal and real. And you should be able to develop that to the highest and best use. The biggest problem that we get into then is the responsibility of the property owner....It was absolutely wrong for people to develop their copper at the expense of everybody else's environment. That was wrong. It is wrong today for somebody to build a house that is inappropriate and...destroys other people's values. So the balance between our right to own a piece of property, and to develop that piece of property as we see fit, either for our own aesthetic value or market value,...between all of those bundles of rights and the responsibility of a good citizen, as a neighbor...that's where, I guess, government and rules and regulations and so on comes in....What is responsible in my opinion may differ from your opinion....Refereeing the property rights [is important, but]...without a question, we're going to defend private property rights....People should be able to hone that property and invest and make money in it, or sell it, or whatever. But there is a responsibility that goes with that ownership. (*Yellowstone County Local Civic Leader*)

People who want to carve their own niche out of God's country for themselves bring problems....Because of our own history of 'let the other guy do what he wants,' which I believe in too, we have a conundrum....I tend to fall on the side of 'let the guy do what he wants unless it affects me.' And I consider it affecting me....It's restricting access of others for recreational use....[It's] wanting to control [the river] so that it doesn't impact their little niche. (*Yellowstone County Local Civic Leader*)

I think you would have any landowner organization, probably the stock growers [or] any outfit that represented a large landowner base, [oppose the idea of the corridor]. That's just how it is. If you're the NRA and somebody says, 'Let's get rid of bazookas,' you're going to be against it even though the average guy is going, 'Why would I want to own a bazooka?'...When you are a group that's trying to protect landowner's rights, it's the same. (*Yellowstone County Local Civic Leader*)

After the '96 and '97 floods, there [were]...multiple projects....The Corps approved some, didn't approve too many, but as the pressures build, we will have ourselves a canal instead of a river. There's a 404 permit process [and] sometimes it works, sometimes it doesn't. It depends on the Conservation District....They can, depending on who [sits on] the Conservation District board, be very rigorous....I think there ought to be some basic principles that have to be satisfied, and I think that those are conservation of the riparian

zone, and conservation of the hydrologic character of the river. (*Yellowstone County Local Civic Leader*)

You don't have to have houses right on the river....It wouldn't hurt them to push it back from the river a little bit, so you couldn't see [the houses from the river]. That is a big step, but I think it's a possibility....We could put homes in [the trees]....It's going to be a long, long time [before people will accept the idea, but] I pushed it and I don't get the opposition that I did. (*Yellowstone County Local Civic Leader*)

It's like everything in life: there's middle ground. And absolutism is a problem. I don't care what it is—religion, land, you name it—absolutism is crazy. There are just a whole lot of people who can't see anything but black and white. The rest of us see grays....It's a struggle. Thankfully, if you look at it in my lifetime, there's a...majority that have seen the grays for periods of time....There's a general consensus that things ought to be better, and that,...collectively, we have a responsibility to the next generation....[But] it costs money. (*Yellowstone County Local Civic Leader*)

VIII. Fulfilling Regulatory Duties

A. Informing and Working with the Public is Difficult and Important

I think that the average person relies on whoever is developing the property....[People] don't think the Yellowstone River can flow 50,000 CFS—it's only running eight CFS [when they look at the property]. They haven't been there that day when it goes from bank to bank. (*Yellowstone County Local Civic Leader*)

The methods...that are based on hysteria methods don't work because they breed the opposite reaction....Credibility is a real problem when you do that....I had a lady call me the other day, 'I just listened to Oprah and somebody on there said the bird flu is coming, and you can expect not to have any water for six weeks.' She was a young mother and was scared enough to think that it was true—that we don't stock any chemicals so we can't treat water...We stock the average supply of chlorine, which is three days in any plant....But even if we didn't have any chlorine and weren't able to treat the water, all you have to do is boil it. (*Yellowstone County Local Civic Leader*)

People have to realize that there are two sides to every story, maybe one good, one bad, but there's two sides. I learned a long time ago when I was working that I had to listen to both sides, and then maybe my side really wasn't right, but maybe the other person was right. And so you learn that...you're always going to have pessimists in whatever you do, but I think...people [need to] understand what you're trying to do...[and] keep them involved. Don't do it behind their back, because you'll lose everything. (*Yellowstone County Local Civic Leader*)

[When] you have people who are talking emotionally, [you can] get caught up in the emotion, rather than the facts. That's why it's important that you have people who can present the facts....Make the decision that's for the betterment of the community. A lot of

times, if you get caught up in the emotional decisions,...you walk away and say, ‘What did I just do?’ (*Yellowstone County Local Civic Leader*)

I think people...have to be educated...that certain times you can swim in the Yellowstone River and certain times...not....The Yellowstone is a treacherous river. People don’t realize that. Sure, everybody thinks it looks nice when it gets hot and you go in there and jump in, but you get such an undercurrent in there, and you don’t know what’s underneath there. We’ve lost two or three people already this year alone....I think once people started utilizing this [river,...] we’ve got to [inform people to]...be careful...And you’ve got to use a little common sense, especially on the Yellowstone. (*Yellowstone County Local Civic Leader*)

B. Don’t Force: Enforce in Ways Best for the River

Bad policy...makes people angry. And the one thing that we found out is that you don’t force things down people’s throats. You sit and work with them and you work on a solution to get it done. That is what creates the balance....We sit down and work it out....This is really a feather in Commissioner Reno’s cap. We are going to actually have a grand opening...for a boat ramp access to a big island down on Pompey’s Pillar. And that has been a site where there have been [both] trespassers and legal access to the river off a county right-of-way for the last 150 years. It is a great spot [for access]. (*Yellowstone County Local Civic Leader*)

One of the ways you maintain water quality is by having the river [in its] natural environment [and] it self-cleanses to a certain extent. That does not address man-made chemicals very well, but it does address natural things pretty well....I hate to sound too Republican, because I’m not, but there are plenty of laws on the books for that right now. They need to be enforced...[and] people need to pay consequences for misuse. I’m not sure there are any consequences right now for misuse. (*Yellowstone County Local Civic Leader*)

The Yellowstone River Master Plan....is basically a vision for a [set of] desired outcome[s,...][such as] maintaining a natural system, and opening it up more to public recreation....Once your goals are established, then you start looking at some ways of achieving it, and those are your strategies. If you do it soon enough, and you do it continually—like, every five years or so—then you’ll be able to take advantage of opportunities that arise....Somebody might want to donate land, or there might be land trade you can get into, or funding that suddenly becomes available that you can purchase land. [If] you’ve already established [areas] you should protect...you [have] the tools to be able to move in an opportunistic way. (*Yellowstone County Local Civic Leader*)

We have to respect people with cattle and animals....We have to respect that people have to have an access on public right-a-way to get to the river—you can’t fence anyone of them out. You have to have a balance, but how do you do it? Do we use some fencing to keep the cattle in? Do we use gates to keep the cattle in and let the fishermen or

recreationalists [get to the river]? That has been a tough one and not every case is the same. We have been beat up over it. (*Yellowstone County Local Civic Leader*)

Clarks Camp...They built it in the flood plain and we have now gone through five years of fighting with those people to get that removed. It [was] originally...just supposed to be porta-potties....Well, someone is living there now. They have been told to move it and they haven't. We have turned it over to the County and now they have the issue. (*Yellowstone County Local Civic Leader*)

We have been involved in some lawsuits. Clark Camp is a perfect example...we dug our heels in and said it is wrong—you are jeopardizing everyone's flood insurance along the Yellowstone River and you have to remove it. [The owner] put a lot of pressure on us...but we were not the ones who made the investment for him....We couldn't jeopardize everybody along the river. (*Yellowstone County Local Civic Leader*)

Create a balance instead of just putting up roadblocks. I have to say that our Conservation District board here is probably one of the most progressive groups I have ever met. They don't just say, 'Ag is the only thing...and, by God, if we need to put a new ditch onto the river,...[Ag can] just automatically get it.' This group takes painstaking hours to look at [the permit applications] and to see what is best for the river. And these are volunteers. Everybody says, 'Well, you come from the urban county and you could care less.' We have Billings, but if you travel around Yellowstone County we have a lot of rural areas [and] a lot of river. (*Yellowstone County Local Civic Leader*)

Slow is a relative term....If it's a very complex project, [one] that you've never heard of before, and you have to go to the State or some other agency to help make a determination whether this is ok, that takes a while. (*Yellowstone County Local Civic Leader*)

I don't know if we're ever going to be able to come to agreement of what we can do without disturbing the environment. Everybody is going to have to be real understanding....We all have to understand each other's concerns....In order to keep the balance, we have to have people that are genuinely concerned about the river, and they have to meet with the people that want to...make some use of the resources....A lot of people get upset because government moves so slow. Well there's a reason for that. Impulse is not a good thing....I think we just have to sit down and trust each other and work together at it. (*Yellowstone County Local Civic Leader*)

C. Identify Best Practices and New Ideas From Other Places

People will tell you they need the access, but that's usually too late because they realize that their access is being blocked. I think [it helps] bringing in somebody that has some experience in another place...[and make judgments] based on maybe projected population...and characteristics of the river....You might need some outside help. (*Yellowstone County Local Civic Leader*)

As you see the growth of that community on the river [near Laurel,]...you're going to see people who want to have access to the river....Hopefully we'll have guidance....We need people who know what that's all about to come [help] us....We've got some great river frontage. All the people of the City of Laurel own that riverside park. So we have a lot of vested interest in that. (*Yellowstone County Local Civic Leader*)

One of the roles [for the Yellowstone River Conservation District Council] is assembling information so that we can learn and share information with all those other counties who are having similar problems. Once you analyze all the approaches that everybody has taken, you can certainly filter out to the ones that rise to the top....I'm sure there are some spots that we could gain knowledge from what others are doing. (*Yellowstone County Local Civic Leader*)

What is lacking for me in my job is [information about] the state-of-the-art. What is going on in Delaware or Kansas? What is going on in Gallatin County relative to these issues?...If only somebody will bring to me the current trends. I was amazed when Gallatin County...put in a mechanism where voters voted to tax themselves to buy view sheds. [They didn't] want lights on top of Bozeman Mountain so, rather than zone it, [they] are going to buy it. When that was explained, it made me wish I knew some of the current best practices. (*Yellowstone County Local Civic Leader*)

We should be able to develop [information] that would serve all of our counties....To say, here's some of the pros...[and] here's some of the bad ideas we came up with....To make sure every county follows the same sets of rules that we make for everybody. And sometimes maybe one set of rules don't fit everybody, but education would work....If you could think ahead....Education is the biggest thing when trying to educate people to...think out of the box. (*Yellowstone County Local Civic Leader*)

If you want the government officials to get involved, give them some good, simple tools to use that are unbiased and that we can create a real balance. That is really what we need, instead of trying to figure out how can I out-smart these guys....And the other piece is, when you go with something that is just pulled out of the sky and is not affordable, you have started a project that is going to die. Sometimes people do that just to ruin a project. I don't understand that either and we get a lot of that. (*Yellowstone County Local Civic Leader*)

Analyze the information you have from everyone...and identify the best ones—best practices. That is how you come up with one....[But be honest during the process]....You have everybody, and they are nodding their heads, and then someone says, 'No, you can't do that. It is against this blah, blah, blah.' Well, you just shot that [idea] down and you just wasted three hours! Lay your cards on the table and be honest about it, for God's sake. (*Yellowstone County Local Civic Leader*)

Whenever we can make an opportunity to educate...that's one of the most important things [we need in Laurel]....We've grown to this point because of the water, and we're being impacted because...we have to understand what it took to get here and what's the

best way to look forward. And that's going to be through discussions....People [need] information....Come forward anytime...[to address] the issues that the people of the City of Laurel want answered....We lack...opportunities to educate our city council...and I'd really like to have [informational] presentations. (*Yellowstone County Local Civic Leader*)

[If we had] a water storage containment system north of Laurel...we could use our excess water intake and pump to a reservoir and feed the whole Yellowstone Valley. Billings pumps their water all the way to 68th Street. It would benefit everybody. There is no way the City of Laurel could afford it, or Yellowstone County. If we have Federal funding it would benefit the whole valley....If that is the kind of thing...[you are considering, we will write] letters of support....That is the stuff we need to know. (*Yellowstone County Local Civic Leader*)

D. Agriculturalists Trust Agriculturalists

With the Yellowstone River Council we actually have Conservation District guys. [They have] buy-in for agriculture....I mean, if you're from Treasure County, you've got Phil Fox—your neighbor. He's on there. So, now all of a sudden, maybe there's a little more to this....Every Conservation District has somebody on the Council. Well, that buys you quite a bit....You take a guy like Kenny Nemitz, who is a personal friend of mine, he's not going to buy into something that's going to hurt a farmer. He just won't do that, I've known him for along time and know exactly how he is. Everybody knows him. If I'm his neighbor, I know...he's not going to go for something that's going to hurt the Ag sector....That's the buy-in. (*Yellowstone County Local Civic Leader*)

Just do an interview with the average person walking on the street in Livingston...and then go over to Sidney or Glendive and [ask] the same questions. You're going to find a world of difference between those two people....Because I grew up over in the east, sometimes I shake my head when I go over west.... I think your buy-in [with the Ag people] is with the Conservation District members—the members have fairly good credibility. (*Yellowstone County Local Civic Leader*)

There is a critical balance....It would be ticklish....Those who are really sensitive to the water [rights] would have some immediate red flags....It is a critical balance that we have right now....It is a real touchy balance. (*Yellowstone County Local Civic Leader*)

The 'family farmer' is barely making it...so, politically, there's a reticence to put any issues under control....All those things would improve water quality, both temperature and sediment control. There's also a belief system among many [Ag people] that there really is not a problem. (*Yellowstone County Local Civic Leader*)

There's a huge fear in the Ag sector about Uncle Sam—what he will and won't do...that Uncle Sam is going to take your livelihood from you—your water....And you've got alarmists in the Ag sector....[who hear about] some ideas out there, and all of a sudden...that's how it's going to be....[Ideas] get turned around....I sat in the coffee shop

in Roberts, Montana and listened to two irrigators....They knew just a little bit on the subject of water rights...[but] they got a little piece of information that got turned over. (*Yellowstone County Local Civic Leader*)

You help people understand that they can better manage their resources....[For instance,] if you...fence your property right and manage your fields and your streams and your water resources, you can keep all of the cows out of there, and you can keep all of those filtering areas good and clean. (*Yellowstone County Local Civic Leader*)

It's dollars. [People adopt new riparian practices when they see their] land is of more value and [they] have better livestock if [they] protect that fragile area....[When they see the] land has an increased value. (*Yellowstone County Local Civic Leader*)

We have a lot of armchair quarterbacks out there....They never have the complete story....We give them time to spout off, and then we sit down and explain it to them. (*Yellowstone County Local Civic Leader*)

Big Horn River to Laurel: Recreational Interest Group Overview

Sixteen interviews were conducted with individuals who use the Yellowstone River for recreational purposes, including hunters, fishers, boaters, floaters, campers, hikers, bird watchers, rock hunters, photographers, and others who use the river for relaxation and serenity. Participants were recruited from referrals provided by members of the Resource Advisory Committee of the Yellowstone River Conservation District Council.

Participants were also identified and recruited by contacting various organizations such as Ducks Unlimited, Trout Unlimited, and the Audubon Society and by contacting local outfitting businesses.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|---|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Big Horn River to Laurel: Recreational Interest Group Analysis

I. Valuing the Yellowstone River

A. The Yellowstone “Adds to the Quality of Life”

The Yellowstone River is worth so much to this area and to the state as a beautiful river....It adds to the quality of life in Montana, not to mention a dependable water supply for municipalities and agriculture. (*Yellowstone County Recreationalist*)

The river...puts us in touch with our history....Clark went down the Yellowstone, and they had some steam-wheelers come up the river as far as Billings. And I’m sure that a lot of fur trappers used the river. (*Yellowstone County Recreationalist*)

We’re avid touring kayakers. We love to go on the river kayaking and watch the wildlife, the deer the birds, the eagles, hawks, beaver, lot of beaver....It puts you in touch with nature and the cycles of nature....It’s just amazing what diversity you see along the river....It’s a pretty special place. (*Yellowstone County Recreationalist*)

It is a symbol of nature and a symbol of godliness....It is at the river that I best understand my role as a human being on this planet. I am part of nature, as you are and we all are. When you stand by the river you have a tendency to realize that. (*Yellowstone County Recreationalist*)

[I enjoy] the fast flow of the main channel, and the ripples in the main channel, and the color—it changes with the seasons. I like it when it is greenish and not so brown. I like it when it is flowing fast in June. (*Yellowstone County Recreationalist*)

I am surprised that you use the term river recreationist. It almost belittles the use because it is not just a matter of recreation. Recreation almost trivializes it, like it is something we don’t need to do. With the river it is more than a matter of recreation, our very life depends on the Yellowstone. (*Yellowstone County Recreationalist*)

To me, it goes back to mental health....[We] need that ability to be outdoors and enjoy. Our kids...and grandkids are becoming so much more urbanized....Kids don’t have the kind of freedom...I had when I was younger. I think we need those opportunities to keep a sane community....That’s why it is so fun to live in Montana because you’ve got so many opportunities to do that. (*Yellowstone County Recreationalist*)

B. The River as A Refuge

When you go down [to the river] you might see somebody else. But you could be down there all day, or all morning, and probably not see somebody else. I have an eight to five

job, where I answer the phone 100 times a day and solve everybody's problems, and when I go out duck hunting or fishing or hiking, the only problem is, 'Should we stop here for lunch or over there?' (*Yellowstone County Recreationalist*)

It's wild. It's untamed. It almost speaks to me. It's a spiritual thing. When I'm on the river, and I just flow with the current, it relaxes me and it kind of de-stresses me. (*Yellowstone County Recreationalist*)

I used to be a big fly fisherman. [I] went up to the Big Horn all the time...but I just got tired of all the people and all the outfitters....For my purposes, and my friends and family, we really love [the Yellowstone] river. This would be our premier river. (*Yellowstone County Recreationalist*)

It [is] neat...to sit on the bridge and put your feet in the water. A lot of people don't get to do that. We're lucky compared to growing up back east where it's crowded. (*Yellowstone County Recreationalist*)

A retired teacher told me he thought [fishing] was just an excuse for doing nothing, so he never fished. I thought he missed something in his life. Even if it's a good excuse for doing nothing, it's a great way to do nothing....I'm pastor and I'm involved in a lot of things....I go out there....[and] the pressure's gone. [I like to] watch the river. Something's moving that I don't have to push. (*Yellowstone County Recreationalist*)

C. Free-Flowing and Natural

I would describe it as a wild, natural river. The longest free-flowing river in the country, not counting Alaska. A meandering, muddy river with gravel banks, and trees having fallen in, and a river that reflects the seasons naturally in color and size. (*Yellowstone County Recreationalist*)

[The Yellowstone River] is a meandering river. And you look all over the face of this globe, and see rivers that are in the stage of development that the Yellowstone is, and you'll see that the Yellowstone is doing what it's always done. (*Yellowstone County Recreationalist*)

You know, every other river in the country is dammed, and it is nice to have something that's wild in your backyard. (*Yellowstone County Recreationalist*)

The river will do what God wants it to do. It's going to change in whatever way it's going to naturally change. (*Yellowstone County Recreationalist*)

In the lower forty-eight, the [Yellowstone provides an] opportunity to float an undammed river [for] 670 miles—there's not any other opportunities like that. You can do it in Alaska, but not here, not in the lower forty-eight. So, it's a neat recreation resource. You go from cold water fisheries to warm water fisheries and view all the different terrain and countryside. (*Yellowstone County Recreationalist*)

[A free-flowing river] helps with cottonwood regeneration along the river. Cottonwoods are important for breeding birds....Cottonwoods need sandbars to germinate the seeds, and if you don't have a free-flowing river to help shift the course of the sandbars in the river then cottonwoods can't regenerate. And if you don't have trees along the river, it decreases the [habitat] for the birds. (*Yellowstone County Recreationalist*)

D. The River's Public Resources

I hope we understand that the river is something that belongs to the people of Montana. Just because you own land along it, you can't really own the river. (*Yellowstone County Recreationalist*)

Water being the thread of life, it's the most essential thing we need. (*Yellowstone County Recreationalist*)

[The Yellowstone River is] one of the most important riparian areas in this part of Montana....The riparian zone is a place that is adjacent to the river and it extends from the river back two or three miles....It's important for bird species and animal species...and aquatic [life]....[It] filters out the dangerous things that might filter into the river. It decreases erosion...and aesthetically it's very pleasing....[It is nice] to kayak the river and camp along the shores in the cottonwood groves. (*Yellowstone County Recreationalist*)

I really believe that every species has a place and....if you didn't have one species, it would hurt another species. So, it's very important to keep that...riparian zone....If you don't keep that, [a species] is going to die, or become extinct, and that's going to throw everything off. (*Yellowstone County Recreationalist*)

We're going to need to understand...the biologic resources of the river....What are the parameters we really need people paying attention to?...I don't think we know those things yet. And that's in the face of coalbed methane development....The BLM is looking at thousands of coalbed methane wells, each of which is producing water...with more saline. So the potential, if we don't have good regulations...would be very significant on rivers like the Powder and the Tongue. (*Yellowstone County Recreationalist*)

The river is a multi-use river. It's used for agriculture, it's used for recreation, it's used for generating energy....There's agate hunting, fishing, bird watching...kayaking...water for cities, and towns. I guess that's about it...Oh, [and] mushroom picking. (*Yellowstone County Recreationalist*)

[You have] cottonwoods...great horn owls, and heron rookeries. In fact, a Fish, Wildlife and Parks spokesperson told me that every seven miles along the river there's a bald eagle nest. (*Yellowstone County Recreationalist*)

I think it is an under-utilized resource....There are some great opportunities for enhancement and enjoyment of it....[We should] develop trail systems within the

community. You know, with the river so close, as well as the rims, you have two natural resources that...most communities don't have. (*Yellowstone County Recreationalist*)

It seems like we use it, but we don't honor it....We use it for our own industrial interests, but we don't seem to give any of it back to the citizens...in terms of beautifying the many spots [along] the river. Of course, it is beautiful by itself in the more rural areas. But, when it comes through the many cities,...it doesn't seem like we've done much with it. (*Yellowstone County Recreationalist*)

The riparian area should all be restored. We have a lot of restoring on the river that needs to be done....[A natural corridor is] a natural habitat area. It does not mean [a] lawn right down to the river that is sprayed with pesticide to keep it green. It does not mean that. To me, [the riparian area] is a natural, protective thing. Maybe there could be bike trails and walking trails so people can enjoy that. Not storage and parking lots. (*Yellowstone County Recreationalist*)

II. Shifting Scenery: Development Along the Riverbanks

A. Homes on the Riverbank/ Flood Plain

Well, I guess Aldo Leopold probably said it the best, 'The flood plain belongs to the river.' (*Yellowstone County Recreationalist*)

If the realtors had their way, they would fill the flood plain with houses as they have in so many parts of the country. (*Yellowstone County Recreationalist*)

When they...develop in the flood plain...their actions can affect others. We have laws that limit what people can do on their property....Their development in the flood plain is not in the greater public interest and the greater public interest is what really needs to hold sway. (*Yellowstone County Recreationalist*)

I think another problem with people building so close to the river is that, aesthetically, it's not very pleasing....From what I understand they're going to put in some riverside trails....Hopefully [those trails] will keep the areas pristine and wild....It ought to be just like the rims, [with] easements that set aside that [area]....Don't allow people to [build] right up to the river. (*Yellowstone County Recreationalist*)

The Yellowstone...is free-flowing and it floods a lot. So you better not put a house right on the edge of the river; it might flood and wash away. (*Yellowstone County Recreationalist*)

I think that we've been really lax in our state, county and city government. They've been allowing people to build too close to the river, and then the river rises in the spring, floods them out....Then, first thing you know, the people start rip-rapping and protecting the banks. (*Yellowstone County Recreationalist*)

You want to make sure [developments] are done in a way that they are not destroying the...feeling that you get from being along the river....Keep your streambed, riverbed...in a more natural state. (*Yellowstone County Recreationalist*)

Keep it pristine and let it flow. It isn't like we don't have enough room to build a little bit back from the river. We haven't run out of room in this state, yet. (*Yellowstone County Recreationalist*)

B. Calls for Stricter Flood Plain Regulations and Stricter Enforcement

One of the most graphic examples of incursion in the river is...up in Paradise Valley, not too far south of Livingston....Five to eight years ago,...somebody came in and bought a chunk of land between the highway and the river, and that's now an RV park....We have RV tailpipes sticking out over the bank of the river....That's the kind of thing that just should never happen....Paradise Valley has been compromised so bad....[It has] been willy-nilly development....Consider the cost, financially as well as the amenities that are lost. (*Yellowstone County Recreationalist*)

I serve on the county zoning commission and [sometimes when] we get a request that is close to the flood plain....we don't even get a map with the request. So I ask, 'Where is this?' and they will say, 'Well, maybe a corner is in the flood plain, but it won't cause much problem.' So, we are changing the flood plain regulations....If I lived downriver from Lockwood, I would worry. (*Yellowstone County Recreationalist*)

[We need to] develop setbacks, like 300 feet back, and prohibit any development in the flood plain....We shouldn't allow any building out to the 500-year flood plain. Unless there is a high cliff, there should be a rigid setback in the planning. (*Yellowstone County Recreationalist*)

Much of the problem is allowing development within the river corridor, by which the natural processes of the river are jeopardized. You can avoid that development. Move it back away from the river, away from the river environment, and emphasize uses within the river environment that...can withstand some flooding. Things like parks or golf courses....Then the need for modifying...and channelizing the river seems to go away. (*Yellowstone County Recreationalist*)

We worked on a project to get together all the flood plain regulations across the state....We put them together and compared them, and we put together kind of a dossier....We started working with Yellowstone County and the flood plain administrator with that array of flood plain regulations and we got a fairly good set of flood plain regulations passed in Yellowstone County....I find it somewhat troubling that more and more it's being altered to accommodate encroachment by development...construction of buildings, homes, and other buildings that are right on the river banks or very close. They're in the flood plain, and then as a result of that, [there's] a lot of ...rip-rapping—so called channel stabilization work—that's being used to channelize the river in the interest of protecting those developments. (*Yellowstone County Recreationalist*)

The ranchers and landowners should not build so close to the river, and I think they [should not]...have their cattle graze right next to the river....Cattle go down to the river and drink and they trample all the...shrubby and grasses. (*Yellowstone County Recreationalist*)

[We need] good, thoughtful flood plain regulations within a county to protect that critical resource....[The Yellowstone River Conservation District Council] has the muscle to do that within State law. Within that flood plain there's quite a bit of authority to do the right thing. (*Yellowstone County Recreationalist*)

I think where [the Yellowstone Conservation District Council] could really play a good role is in supporting good flood plain regulations within our counties. (*Yellowstone County Recreationalist*)

C. Housing Developments Threaten Water Quality

[When] the high water comes, or you have an ice jam, or...the spring run-off [comes], you flood your septic tank or cesspool...[and] that material in that pool goes right into the river. There's a capacity for the Yellowstone....You can exceed that capacity, and then you have a real problem....We need those setbacks. (*Yellowstone County Recreationalist*)

I wouldn't allow septic tanks....If they want to put in a subdivision of 30 cabins along the river, they would have to pipe that water, pump it back, away from the river, away from the river gravels, maybe to a pond and have their own septic system there. (*Yellowstone County Recreationalist*)

With people building homes close to the river, I think there's a danger of fertilizer runoff into the river and that probably would create algae blooms [due to] nitrogen. (*Yellowstone County Recreationalist*)

D. Other Development: Industry and Municipalities

I would hope that the City would learn to respect the river more than they do now. The banks and the industrial development in Lockwood are just terrible. The County Commissioners think everything should be zoned industrial and Lockwood is very close to the river. I would like to see us change all of that so that all along the river it is a natural corridor. (*Yellowstone County Recreationalist*)

The river has to change. As Billings grows, and Laurel grows, and everything else grows, our water supply comes out of the Yellowstone River [and the river has] got to go down....[But, in terms of] habitat, it's essential that the river rise, that floods sub-irrigate [the] ground and create the nesting habitat for...ducks and geese....It has to do its natural flooding. But if we keep drawing more and more water out of it, it's going to change the natural habitat. (*Yellowstone County Recreationalist*)

You do have all the industry, too. There's an awful lot of industry that's down by the river that creates not exactly what you would call pleasing environments....Yet it is part of our culture. I guess we all have to be a little tolerant of everybody else, because we can't have everything our own way. (*Yellowstone County Recreationalist*)

E. Agriculture, Economies and Land Prices

Most of the irrigation projects in Montana were built around...1900 to 1920. They're over 100 years old and they're still operated [today as]...they were when they were built, say in 1910....They're operated very, very inefficiently. There is much more water diverted than is really needed to water the crops. That tends to dewater the river. There's much more water returned to the [river] than needed...and that water is usually laden with silt and Ag chemicals, pesticides, nutrients and so forth....And I'm not anti-agriculture at all. I mean, I don't want to come across as hypocritical at all. I eat the meat and I appreciate it. But I think there are some gross inefficiencies in operation, and that unfortunately degrades the quality of our river. (*Yellowstone County Recreationalist*)

Is it necessary to plow up that land? Is it going to be productive land? So then we plow up a piece of land and pretty soon it's not productive. We decide that we plowed too close to the Yellowstone [River]....It wasn't good quality land to plow because of the way it's sub-irrigated. It had too much alkali in it so they couldn't grow anything in there. Now you've changed the natural grasses that were along that river [by] trying to plant something there, and with the sub-irrigation, the farmer said it's not going to work....That was a pretty stupid idea. Who draws the line? (*Yellowstone County Recreationalist*)

So if that river meanders and goes away all of a sudden, and you're a person that's doing pivot irrigation, and you can't get water out of that river, you've got a real problem. I mean it's a critical problem and you don't have a year or two to sort this thing out. You need to figure out how to make some provisions where you can get that water, whether it's for livestock or whatever. So,...there's a lot of ongoing problems and that will probably continue forever. (*Yellowstone County Recreationalist*)

But it's my understanding that there are some tax benefits [with conservation easements] that are attractive, maybe not to everyone, but to some people. But the easements are sold. They receive a part of the value of the land right now when they issue the easement or when they grant the easement. They're paid for that. Then when they sell that property, they have to sell it with that encumbrance, so maybe they get a little less for it then. But they've gotten that value up front. Now, if they manage that money that they've got up front, invest it, or whatever, [it] could be that it will be worth as much or more of that selling price [than] if it didn't have that encumbrance. (*Yellowstone County Recreationalist*)

III. Access Dilemmas: Demands, Limits and Controls

A. The Importance of Public Access Laws and Public Lands

The Department of Fish, Wildlife and Parks was proposing a fishing access site near the Duck Creek Bridge....A few of the people that built homes right on the river [near the bridge] were at this public meeting. Their big argument was, 'We don't want recreationists on the river. We bought a piece of the river to have it for ourselves, and we don't want the public out there.' And really that's the kind of attitude that just can't be tolerated by our public managers....The Conservation Districts and the County Commissions [have to protect] the greater public interest,...not those few individuals that bought their little stretch of the river front....They really need to look at the long-term public interest and the real values that that river has for the greater public into the future. (*Yellowstone County Recreationalist*)

The private property lobby has tried half a dozen times to turn over our stream access law in both State and Federal court and [the lobby] lost every time. They're afraid of...the setback strips [and] controlling the kind of thing they do in the flood plain....They are worried...that [the river] is such an important public resource that there will be some kind of limitations on what they can do on their land. And there probably will be. (*Yellowstone County Recreationalist*)

[I heard it] said our society has a bundle of sticks and society...controls those sticks. They issue them out one at a time to private landowners, and they can take them back to depending on the situation. I think most of us don't want to do away with private property. We all live, or were raised, on private property, for heaven's sake....But there comes a time when private property might be impacting [the] public resources of our society....There has always been some limitations....As an example, you can't sell your topsoil to the Saudi Arabians...But that doesn't mean that's the end of private property. It means that society is going to take back a few sticks. (*Yellowstone County Recreationalist*)

So, we decided, 'All right, there's an island here. Let's find out who owns that island and maybe we could get an access'....Well, we started looking, and nobody was paying taxes on that island, so we said wait a minute whose is this? So, through a series of actions, the BLM finally said we own it. We manage that island. It's been a public island for 100 years and nobody knew it. (*Yellowstone County Recreationalist*)

If you look back at the history of the United States, the public land and the public water have been enormously important. Our champions are people like Theodore Roosevelt and the national forest, the national park, the national wildlife refuge, the national monuments. All of those are part of the public estate, and we think the public estate is very, very important to our society—equally as important as private property....Our position is, what's private is private, but what's public is public and it should be treated with the same level of respect....You can't have private water where the Constitution says it's public, anymore than you can have public water if the Constitution said it was

private. And we don't just sue every time we turn around. We talk to people. We try to convince them it's wrong, that they shouldn't do it, but we have a hammer and we'll use it. (*Yellowstone County Recreationalist*)

We have to determine exactly what is public and what is private.... Here's an example: the meander surveys. When the general land surveyors came through here around the turn of the century,...they didn't try to run a chain across the river....They went up and down stream with a series of meander surveys, meaning they shot bearings and distances following pretty much the high water mark. And this is how they define [the high water mark].... Public land, all navigable bodies of water, and other important rivers and lakes below the line of the mean high water mark, are segregated...from lands open to private ownership....Once the State was established, the lands within that meander survey were turned over to the State of Montana, including the islands. Who owns the islands now? That has never been completely cleared up. There are some islands that have been identified. (*Yellowstone County Recreationalist*)

A guy from Florida bought a piece of land and [across a corner] there is a little...road that's been used for many, many years. [The road] accesses the national forest....He closed it off; he gated it....You just simply can't let that stand....You can't depend on the County to fight them because they don't have the money. We're disappointed in some of the Federal agencies. They should be fighting these problems....Part of the idea of the public resources—like BLM, Forest Service, and land management agencies—is that people can get to their [public] land. They have to....They can't brag about a 'land of many uses' if you don't get there. (*Yellowstone County Recreationalist*)

We have the tension between an urbanizing population and a rural philosophy legislature. And generally governmental bodies...lose opportunities for the parks and access....So the immediate problem is that you have this significant population influx, and subdivision development, and it's bumping into the rural philosophy of ...'Leave us alone. this is our land we can do with it what we want.' So, that's having an immediate effect. (*Yellowstone County Recreationalist*)

I think it will change drastically as far as people building along the river....[and how] that relates to access to the river....I think that [as] a whole lot more private access show up...it will detract from [the public use] of those areas of the Yellowstone....If it were mine, I would do the same thing. I think that is the way it should be as far as landowners' rights....I don't feel encumbered by houses on top of me. I might when the number doubles or triples or multiplies by ten, and it will. (*Yellowstone County Recreationalist*)

Yeah, subdivision law is set by [the] State legislature basically, so counties are very hamstrung in terms of their abilities to really plan and to force some kind of conservation standards. As an example, you can take a big track of land...and you can subdivide it into 20-acre blocks and [then] you sell it as undeveloped 20-acre lots—almost no constraints within counties for that. Then you own a 20-acre block and you come back in and you ask for a process to subdivide that 20-acre block. You divide it into five-acre blocks—almost no constraints on that. And then you come in with a subdivision plan for that five

acres, and it's small enough you don't have to provide for any parks or public constraints. So that's what's happening. So the effect...is that all [developments] lack any coherence. And where you have a really important public environmental resource like the Yellowstone River, which is important to so many things, it has impacts.... [The counties] are really handicapped because of the state laws that govern them. (*Yellowstone County Recreationalist*)

If I live along the river, I don't want other people down there.... That seems to be the resistance to trails in general in this area.... Any time you have private property, people do not want other people down there. And yet I think the river is a community asset so everyone should be able to at some point to enjoy more parts of it anyway. I am not saying you take away people's private property. But I think...we should still provide some kind of a corridor for the public to be able to access. (*Yellowstone County Recreationalist*)

B. Problems with Access

I think river access is a really important issue. Until they opened up Josephine Park, I used to crawl under the fences and sneak down to the river. The first time I saw that they put the path down to the river and I didn't have to crawl under fences, I actually burst into tears. (*Yellowstone County Recreationalist*)

I don't have access to the river and its islands like I used to.... It used to be anything below the high water mark was legal hunting, but today it's considered private property on the islands and you have to have property owner permit in your possession. (*Yellowstone County Recreationalist*)

When you fish, you meet people in different communities because you go to have lunch afterward.... You get to know some of the farmers. It helps to know some of the farmers so that you can get access to the river. (*Yellowstone County Recreationalist*)

Public access is being squeezed.... When people...pay tens of thousands of dollars for small acreages up against the river, they don't want a lot of company there. A lot of them don't like it honorary either. The tendency is, and will continue to be, to close off access.... Landowners, who own 84 percent of [river access in Montana], say, 'We don't want to have you here. We bought this...for ourselves, and we don't want it where you can go through here.' (*Yellowstone County Recreationalist*)

Achieving more access to the river for the average person, I would have to believe is a good thing.... [For] example, when...someone has a Federal land loan [and] they go bankrupt, [if it] would be a good access spot.... Make it [public].... [Make it] as open as you can to the public...I don't have much of a problem because I know some of the private landowners...and [I've] cultivated relationships over the years. (*Yellowstone County Recreationalist*)

You have to separate law enforcement from access. You can't say, 'Well, the public is not entitled to access to public land because they might do something wrong' anymore than you say you can't have access to the public library because someone might tear up a book. (*Yellowstone County Recreationalist*)

If you're going to float the length of [the river], you don't know where you can stop, where it's legal to stop. You're not sure where you might get off to get re-supplied or to have people meet you. There needs to be maps. There are some sections where the access is really poor. (*Yellowstone County Recreationalist*)

Any place where a road would cross [Montana Rail Link's]...property to get to the river, they're in a habit of closing it off. So you can get in if you walk, but you can't drive in. Sometimes that's inconvenient....I carry a big ten gallon cooler that's a minnow aerator. And if I don't bring a small minnow bucket, I'm kind of stuck as far as getting my minnows over to the fishing site. I wish there was more access to the river. (*Yellowstone County Recreationalist*)

[We need] trails [and]...places for people to access [the river,] to enjoy it in whatever sense. We do have some of that with River Front Park...but it is not necessarily the easiest place to get to....It would be better if you could access it from the community. We don't have a real good access point just because of the environment [the Interstate] we have built in between. (*Yellowstone County Recreationalist*)

C. Decorum: Respecting Others and the Resources

When you go camping, you don't leave your beer tops and...paper plates. I just hate litterers. If you leave it cleaner than you found it, the world would be a better place. (*Yellowstone County Recreationalist*)

I think that the usage will go way up. There will be an awful lot more people using the water. And when you have those people using the water, then you have conflicts from those uses. (*Yellowstone County Recreationalist*)

Not everybody that would agree [with me]. I take my little jet boat out there, and I'm going to offend a bunch of people on that bike path because they're going to say, 'Well that makes noise and it puts out a little smoke'....Through education I think we can bring a lot of people around. (*Yellowstone County Recreationalist*)

We see more and more of the big jet boats....Usually, they've been very congenial and I think they watch out for kayakers, but....sometimes they get a little close to you. (*Yellowstone County Recreationalist*)

[There was] a place that had wonderful waterfowl recreation....Now...there are so many kids going in there shooting the ducks...they've absolutely just ruined it to the point where I'm not sure if any of us will go back anymore because there's just so much pressure on it....With waterfowl you can't pressure things too much or pretty soon they'll

just go away....I think the only way you could do it is to try to educate [people].
(*Yellowstone County Recreationalist*)

When you actually look at trail systems,...99 percent of the people that use those trail systems are good, family-oriented [people]...just wanting to go out, not wanting to pollute...or do something to their place, but just be able to enjoy the area. And they become eyes and ears...of whatever system is out there. (*Yellowstone County Recreationalist*)

D. Recreationalists At Odds with One Another

One conflict that comes to mind would be between self-propelled, quiet users versus jet boats or jet skis. (*Yellowstone County Recreationalist*)

You have people who like quiet recreation, and you have people who are more into motor sports....You always have these groups that are always at odds with each other.
(*Yellowstone County Recreationalist*)

There is a lot of pressure on outfitters and the board to get rid of the outfitters....Most of the complaints...have to do with the river traffic. What I think is valid is that we prompted it. We get people up here to experience some of these things because we have world-class fishing....[The public] foolishly think that the fishing we have here is available everywhere and,...if there were no outfitters, people wouldn't fish it. Neither of those is true. We do have world-class fishing here and it happens that I guide people one time and they come on an annual trip and they do it themselves. Did I cause that? Maybe. The same way that everybody in town that takes their uncles out and fishes it. The traffic increases because of it....What I think is invalid is [they] think that the number of guides has a negative affect on the fishing or the fish. We generally take great pains to play the fish well and keep them alive and to never keep any unless they completely insist on it. If people can be talked into putting fish back, we do. I don't begrudge the guy who walks down on the bank and catches his limit. I am frustrated about him complaining about me hurting the fishing because I am not. If you take a few out, the food volume stays the same....The rest [of the fish] just get bigger. (*Yellowstone County Recreationalist*)

IV. Ideas About Erosion and Rip-rap

A. Erosion is Not Necessarily a Problem--It is What the River "Wants to Do"

[As] a hydrologist, I studied river mechanics and fluidal geomorphology and from that perspective, the channelization really changes the character of the river. [Channelization] creates...an artificial river system, really. Often times the so-called channel protection work that's done in one place, causes impacts immediately down the stream. The river is not allowed to meander and shift as a mature river like the Yellowstone wants to do. It can cause unnatural artificial areas of degradation and aggradation, or deposition, or erosion of stream materials, or loss of streamside vegetation. We're losing the

cottonwood trees and much of the riverine environment is changing as a result of man's uses and developments. (*Yellowstone County Recreationalist*)

I think erosion is part of the river in terms of the river flow itself. (*Yellowstone County Recreationalist*)

Sometimes it's heartbreaking to see [erosion]....But, on the other hand, it's a wild river and it's expressing itself in such a way that it makes it what it is. It's a living entity that gobbles up one bank one year and might turn around and gobble up the other bank the next year. That's what's uncontrollable and that's what makes it wild and adventurous for those of us who like to get on that sort of thing. (*Yellowstone County Recreationalist*)

B. Rip-rap and Its Effects

Most of the time, people haven't taken the time to determine how to go about it properly. They don't go through the permitting process correctly. Traditionally, what happens is they will do something inappropriately and then it sends the problem farther downstream, to the next guy. (*Yellowstone County Recreationalist*)

Pretty soon you have a ditch, you know, rather than a river. In some cases [rip-rap] is legitimate, in other cases it's probably overdone. (*Yellowstone County Recreationalist*)

The riparian zone along the river is altered as soon as you channelize the river. You don't have the over-bank flows...that renew the riparian zone along the river. And that's habitat for wildlife of all kinds....If left natural it can actually help alleviate flooding problems downstream. So, a lot of the times, the channelization of the stream just creates more problems....[And] there's a loss of values in terms of recreationists being able to enjoy...a viable fishery. (*Yellowstone County Recreationalist*)

[The river and the riparian areas are] less healthy for two reasons. One, there's been a lot of development taking place—I'm talking the entire river, not just around Billings. And [two, I see]....miles and miles of channelization of the river...that very seriously compromises the riparian zone. So, sure, it's gone down hill a lot in the last 30 years. (*Yellowstone County Recreationalist*)

I think that the erosion problem....is a result of stream straightening. You don't have the cottonwood growth to hold the banks and keep the erosion down. (*Yellowstone County Recreationalist*)

You get a guy with more money than he knows what to do with, and he's paid tens of thousands of dollars an acre for land along the river, and here comes the damn river and starts washing [his land] away. Now he can afford to do something about that, and he will do it. What he doesn't understand is that the degree to which he does that, it is going to hammer the guy downstream. So, he has [created] unintended consequences which he's not responsible for—he should be. (*Yellowstone County Recreationalist*)

I assume [rip-rap] confines the river and screws up the fishing. (*Yellowstone County Recreationalist*)

Rip-rap [is used for erosion], but that's not pleasing as it is so unnatural looking. (*Yellowstone County Recreationalist*)

There's a guy between Laurel and Billings...that...put big rock jetties out into the river to stop the washing. I don't think it's impeded anything. In fact, sometimes some of that stuff gives the fish more cover, more places to go and hide. (*Yellowstone County Recreationalist*)

C. Rip-rap Does Not Work—Maybe

Keeping the river from meandering is like stopping a natural process. The river meanders; rivers do that. Particularly mature rivers, like the Yellowstone, that are not constrained by the geology. In other words, it's not a rock canyon, it's a meandering river. Keeping it like it is means allowing it to perform its natural function. It doesn't mean locking it in, channelizing it, holding it in the same channel forever and ever. That won't work. It simply won't work. (*Yellowstone County Recreationalist*)

I think from the standpoint of silting, I think allowing them to put stones and old broken pieces of cement and stuff along the riverbank is probably not a bad idea. It'll prevent a lot of land being cut away and being dumped into the river. I think they need to be careful. I would imagine some things they could put in there could be toxic....Any places where they've done that in the past, I can't say it's damaged the river or anything. (*Yellowstone County Recreationalist*)

V. Comprehensive River Management

A. Cumulative Impacts

[An example is] the farmer, who has plenty of capacity in his irrigation pump. It's going to be a 100-degree day today, and he knows that if he can get lots of water to those plants on a day like this....So he grinds that pump out full blast and water runs off,...carrying silt off into the stream. And he sees the stream as a little dirtier, but what's the impact of that [little extra]? And the guy upstream does it, and the guy downstream does it, and the guy up-beyond does it. (*Yellowstone County Recreationalist*)

The pressures from industry, agriculture, and urban areas are not benign on the quality of the Yellowstone River. Also, we're beginning to channelize the river and drastically affect the biota, the quality of the water, the quality of the scenery, and the quality of the recreation potential. It has limited capacity to supply all of these things....It's over-adjudicated and it's under-regulated, but there's not a conservation strategy....There's a direct tie [between] how well we manage all these activities and the health of the river. (*Yellowstone County Recreationalist*)

There's more and more users, so we'll probably be losing water....Actually from the Park on down, there's just more and more folks wanting a place on the river. The guys who are farming or ranching, they're selling those home sites. That's going to be an issue someday too....Everybody can't have a place on the river. (*Yellowstone County Recreationalist*)

When you get people living so close to the river,...they place all their various junk...down by the river and then when it floods that all goes into the river and creates hazards, especially for the wildlife. And fishing line is another thing we see....You know it entangles the wildlife, especially birds....Up by Canyon Ferry, they've got these PVC pipe tubes...[for] used fishing line....[You] put it in [t]here, and they have a cap on it....[They are] at all the fishing access sites....Maybe they could start putting them in here. They're very inexpensive to build. (*Yellowstone County Recreationalist*)

[We need] protection of the animal life on and near the river. The bald eagles, the deer, the birds, all the multitude of birds and even fish that are on the river could be harmed with too much growth, too close and everybody wants to be on the river....I wouldn't mind being on the river. But, at the same time, it might impede the success of animal reproduction in those areas and it would be a shame to lose it. (*Yellowstone County Recreationalist*)

The sauger fishery is pretty weak anymore compared to what it was. There were times when you could get four limits of 15 fish in an hour and a half or two hours right at Huntley. And now to catch 15 fish in a day would be pretty good sauger and walleye fishing....I think they've been over-fished....The problem with sauger, of course, is that people have a hard time telling them from walleyes. A lot of the Montana anglers are still coldwater-oriented people....The ling population has dropped right off on the Yellowstone too, and I think that's probably an over-fishing situation too. (*Yellowstone County Recreationalist*)

B. A Need for Balance

Money talks. Sometimes it screams. (*Yellowstone County Recreationalist*)

I believe you have to balance the needs....How many more people can move into the Billings area before it starts affecting the water supply?...So it's balancing that recreation use with that agriculture use...with the whole picture of who gets to decide. (*Yellowstone County Recreationalist*)

I don't think the balance should be for the users. It should be for the river....An ATV-user [might ask,] 'Don't I have a right to ride along the bank and down to the river?' No, [ATVs] cause erosion and they destroy habitat....Jet boats would be a disaster for the wildlife if they covered the river with them. If it is not healthy for the river, they don't have that right. We have to do what is healthy for the river....I am not against property rights, but the river is primary...and it belongs to the people of Montana. The people along the river have to share their property with all the people that own the river. The

river is not healthy unless it has good riparian areas, good habitat, and room to move. It is, above all, a meandering river. Our only criterion has to be what is healthy for the river. (*Yellowstone County Recreationalist*)

The big issue we had this last year with our county was trails. County supervisions would not stand up in front of the rural people and say, 'Guys, here's what this means....We can change this wording so it's a little clearer to you.' No, they didn't do that. They were willing to throw out all the planning that had been done for trails because the sky is falling, and they wouldn't stand up and just be honest about what the world is about. Who's Bill Kennedy? He's supposed to be a progressive. He's not. That's to be put on the record. (*Yellowstone County Recreationalist*)

How do you balance it out?...In the past, when an industry asks nature and those of us who try to protect it [for something], it never compromises in the other direction....I don't think compromises work when it comes to that because we're asking nature to give a little more....I know we try to stiffen the laws but there's so many things grandfathered in that you can't do anything about. Once it's taken, it's gone. Balancing is a difficult issue in an environment that's worried more about their monetary welfare as opposed to say the bald eagle or those animals that depend on the river all these many centuries. (*Yellowstone County Recreationalist*)

They [houses built on the river] are bad in that they change the feel of being by yourself on the river. It doesn't have the same feel as it once did....If I owned a place I don't blame the people. I don't have the right to tell them not to build there. I don't want to pretend that my view of the river is more important than their rights as landowners because I disagree with that. It is a tough question but if this were a question about do I have the right to guide on the river, I would want to defend my right to use the river for fishing but at the same time I want to respect the landowners' rights. I think they can coexist. (*Yellowstone County Recreationalist*)

I think that you have to have some realistic expectations [that] some things will be lost along the way....I've heard the word 'steward' so much. That word is so trite I hate to even use it anymore, but I guess until a better word comes along....[I hope] that we would be able to hand this thing off and do it in a quality way, but listen to everybody too. (*Yellowstone County Recreationalist*)

C. Management with Vision

[An important step is] getting the cities, the states, all the people coming together and discussing these [tough] issues....But we have to discuss them, and we have to have a vision. And, number one, we have to say this river is important to us. It's important that we keep it pristine....It's so important for recreation....It's important to have the wildlife. It's important to have this sanctuary. So, we need to value it, and we need to really get in there and discuss it. (*Yellowstone County Recreationalist*)

I'm optimistic and pessimistic. I think, within the next ten years, it's going to take people with a lot of vision to protect the river. Vision and foresight. And willingness to go out on a limb and develop some green-ways, and cut down on things that could damage the river such as straightening the channel....Hopefully there will be people to step up to the plate and protect the river and voice their concerns. (*Yellowstone County Recreationalist*)

There are some good things happening in the state that they can also look at, and the Madison valley is one of them. Now there's been some encroachment on that river. But there's also a strong move afoot to conserve that valley and to put conservation easements on a lot of the ranches, and to try to prevent us from losing that wonderful Madison Valley....I think there's some real forward-thinking people behind that. (*Yellowstone County Recreationalist*)

My suspicion is that there are a lot more problems along the Billings area. I think the people in the upper Yellowstone are more conservation-minded than here and in the eastern counties....I don't think we pay enough attention to the preservation of the Yellowstone River and the wildlife habitat along it....I hope we get more conservation-minded in our attitude toward the river. Otherwise it will be a disaster. I think it should be in better shape even than it is now. (*Yellowstone County Recreationalist*)

The conflict can be huge, and will be huge if we don't think about a long-term strategy for the river....You have 18 Federal and State agencies that have some responsibility [for the river], and that doesn't count all the cities...[or] all the counties....So who's managing it? Who's thinking about the overall quality of the river?...The river is tremendously threatened...because of lack of focus, lack of attention, lack of thought. It's about [protecting]...the qualities of this river that are important to our society. (*Yellowstone County Recreationalist*)

This is difficult for county supervisors because...it plays against that rural philosophy which they see as representing their constituents. But in Yellowstone County who are the constituents of Yellowstone County board of supervisors? Well, it's Billings, too, but that's not the way they look at it. You can [have] a 1,000 Billings-ites whining, but [if] you get a dozen of these rural people out here whining, that's...the squeaky wheel that will get attention. So, [as far as] stronger subdivision regulations...[or] stronger planning regulations,...most of these rural communities are not going to be enthusiastic about that [and] it pits [the townspeople] against these rural people. (*Yellowstone County Recreationalist*)

[The Yellowstone River Conservation District Council] has roots in those local counties...if they're armed with good knowledge about this river, and all aspects—the social economic importance of it, the biologic importance of it, the industrial, agricultural benefits of it, and what it is that has to happen to preserve that for future generations—they will be in a stronger position to have real effect on it. (*Yellowstone County Recreationalist*)

I hope that...there are some people that will step up and protect the river, and become river-keepers....A river-keeper is basically someone or a group of people who will watch out for the river and...keep it pristine and keep the wildlife....They are kind of like watch dogs. (*Yellowstone County Recreationalist*)

D. Collaboration

The Conservation Districts have done a very wise job in establishing this [Yellowstone River Conservation District] Council and [in]...taking a look at the river comprehensively....[The Yellowstone River Conservation Forum and the Yellowstone River Conservation District Council] did put goals together,...pretty darn good ones, and they are still good ones. We didn't get everything in them we would have liked to have seen. For instance, it didn't have anything in there about access and it didn't have anything about recreation, but it did have goals for clean water, sustained flows, wildlife conservation, protecting endangered species, and some really worthwhile goals. (*Yellowstone County Recreationalist*)

[Regarding a possible alliance between agriculturalists and the Audubon Society]...Sure. Probably the "Z" word, zoning, could be a potential point of discussion. My impression is [that] in most of Montana that's a four-letter word. I've got to think those people [agriculturalists] are shaking their heads, too, when they see...houses down below [in the flood plain]. (*Yellowstone County Recreationalist*)

We had just had two big heavy flood years. And the response to that was the Corps of Engineers was issuing rip-rapping permits like mad and the conservations groups were beginning to get concerned....So I pulled together a number of conservation leaders and we talked about the idea of a Commission and they said no, we ought to focus on the Yellowstone River. So that led to establishing the Yellowstone River Conservation Forum. (*Yellowstone County Recreationalist*)

The Audubon Society, Trout Unlimited, the Greater Yellowstone River Coalition were suing Corps of Engineers for their lack of doing environmental reviews for all of these projects [that] they were doing....The Corps of Engineers lost the judgment and a judge directed them to do the work, which they have not really done yet. (*Yellowstone County Recreationalist*)

We jointly sponsored a two-day seminar and invited all the agencies in, all the agencies being 18 of them, they all came. I think everybody but the BIA. And they all pledged [at] the end of the conference to cooperate in a cooperative approach. And the state of Montana has been a great supporter of this whole effort, particularly in terms of DNRC. The NRCS has also been a good cooperator for this effort....The Corps of Engineers... they're hard to work with, but more recently they've been pretty cooperative. It's a wretched bureaucracy and they do it the best they can under that bureaucracy that they've got. (*Yellowstone County Recreationalist*)

If we made it easier for the public to experience and enjoy the river and you got more people involved in the uses of the river for all the right reasons, you would have more people on the side of the right direction as opposed to the industry and those people who use it for better or worse. I'm thinking that the more things you can do to the river to provide recreation for the community,...the more people that you'll have drawn to the attention of its needs to combat the industries that don't really care. That would make them a stronger ally. (*Yellowstone County Recreationalist*)

E. Management Agencies

A lot of people...[are] not too excited about any kind of a survey to know what's going on. They're not sure if it's going to affect them, pro and con...All these avian studies, there [are] people that have expressed concern because they're not so sure they want people on their property talking about birds....They're not sure if they're going to have to deal with some endangered species or Big Brother coming in and saying, 'Oh, I noticed that you got a couple bald eagle less than you got last time and now you're going to have to do this'....So, communicating...in a way the people can understand and be honest about the whole thing, there's a tremendous need for that. (*Yellowstone County Recreationalist*)

There [has] to be some more enforcement regarding the use of the river, from a recreation standpoint, as well as agriculture....In order to do that, we need to have knowledgeable, sincere people in management positions. And you can't do that without money....We are going to have to fund the necessary people and enforcement policies that you have on this river to protect it. The public estate is too valuable to trivialize or to fall victim to those who say we shouldn't be paying any taxes. (*Yellowstone County Recreationalist*)

The State will cap the number of users at some point. There is too much public support for that not to happen. Our outfitter association has been able to fight it and there are a number of expensive steps that the state would have to take to implement a moratorium on user days. I am torn as far as what should happen. (*Yellowstone County Recreationalist*)

F. Education

[The Yellowstone River Conservation Forum and the Yellowstone River Conservation District Council]...agreed that we ought to start getting fundamental knowledge on the Yellowstone River. And, that that fundamental knowledge, that science should be brought to bear in developing Best Management Practices for the river. (*Yellowstone County Recreationalist*)

[For example,] I think sometimes people that own [boats] and have never kayaked ...don't even realize...that the noise or possibly coming so close to kayakers, that it bothers them....You'd get together and say, 'Let's try to ease this, and be more aware that there's kayakers on the river.' (*Yellowstone County Recreationalist*)

We just have to find the language so that you really can communicate. Montana has a history of trying to deal with the commons. Back in the early grazing days, most of these rural people understand that you just can't turn unlimited numbers of cattle loose on the range and have everybody using it as a commons. You'll find that a lot of the rural people kind of understand that....So Montana was really one of the first states to...deal with...the abuse of the commons....It's certainly the kind of issue that we're dealing with here...if you're going to have Best Management Practices, a cooperative approach, and an education approach, we really have to find the language that communicates between kind of these urbanized people, the rural people, and these other people who are itinerant rich people coming in. (*Yellowstone County Recreationalist*)

There were a couple of fellows from the Audubon group that took an interest and started going to their [Yellowstone County Conservation District Council] meetings and were greeted with kind of suspicion and alarm at the beginning....I think that's gradually changed to an acceptance. I think it's positive to get more than just agriculture interests involved in the Yellowstone River issues of the Conservation District business really, and it sounds like maybe they think that too, if they've gone to the trouble to commission this survey. (*Yellowstone County Recreationalist*)

I think where [the Yellowstone Conservation District Council]...can be helpful is...with an education program. People understand how important this river is to everything we are about in this part of the state: our culture, our society, our production base....Everything we do here is dependent on it, almost everything....I think that the Council really has an opportunity there for an educational program. (*Yellowstone County Recreationalist*)

You [outfitter or guide] are constantly showing by example. When we come into a crowded area, I tell them to reel in and we will dodge fishermen and get through here fast....I feel like because of the things that I do to teach ethics and etiquette that these people, when they do come back, they will be a friendlier user of the resource than you would have otherwise. (*Yellowstone County Recreationalist*)

VI. Concerns

A. Concern: Agricultural Run-Off

One of the things we hope to see happen...is modernized irrigation practices....Most of the farmers are using 1,000-year old irrigation [methods]....In this hot weather, [they] put as much water on those crops as they can, and they over irrigate in spots and so it carries away silt [and] chemicals back into the river. (*Yellowstone County Recreationalist*)

[A farmer] certainly has a right to earn a living. But he doesn't have the right to pollute the river with contaminants and pesticides to do that. He has to figure a way to do it without damaging the river because the health of the river should be our primary focus. (*Yellowstone County Recreationalist*)

Irrigation return flows is the single biggest pollutant on the Yellowstone River, carrying sediments, agricultural chemicals nutrients off the land. The most graphic of that would be at the Clarks Fork. (*Yellowstone County Recreationalist*)

Regrettably the water quality particularly below Laurel has been compromised in places primarily as a result of agricultural use along the tributaries. And stream flows have been reduced to undesirably low levels during the summer. That's a result of large diversions on the river. (*Yellowstone County Recreationalist*)

Some of the rivers tend to put a lot of mud and silt in [the Yellowstone River]. I'm not sure why that is. I'm not sure if you can blame it on fields that are washing into the river or whatever the case is. (*Yellowstone County Recreationalist*)

B. Concern: Water Quality

We need to conserve as much land as we can for habitat and [make] sure...that the river stays as clean as possible. We can conserve all the land in the world, but if the river goes to hell as far as the quality of the water,...then we've accomplished nothing. It won't be good for anybody, man or beast. (*Yellowstone County Recreationalist*)

For example, we have a PCP plume coming from a cleaning place on Central Avenue that is heading toward the river all under the ground. PCP doesn't disappear. Eventually, it has to get to the river. It affects the ground water. (*Yellowstone County Recreationalist*)

You know, other little things, like mercury, for crying out loud, coming off of our power plants, coming into the Yellowstone River. Right now women aren't supposed to eat too many of those fish....And nobody's at fault and nobody's responsible, you know, as a community. (*Yellowstone County Recreationalist*)

Our Governor's got to play hard ball with Wyoming....I don't know if you've seen any of that coalbed methane development over there, but their getting better, but they are not good. (*Yellowstone County Recreationalist*)

Obviously we have...the legal laws on septic systems that would be such a pollutant to a river....You can legislate all you want, but if you don't have somebody to enforce the rules that you legislate, enforcement is more difficult than the legislation part. (*Yellowstone County Recreationalist*)

[The water treatment plant] is absolutely essential, but I don't think the city should be buying property down there....And I don't think they should have their storage and washing and storing their trucks there...right on the bank of the river. (*Yellowstone County Recreationalist*)

A few years ago, in Laurel, we did have problems [with pollution]. I think it's been taken care of, but the Cenex refinery had a pipe running into the river that was pumping raw gas into the river....The Department of Environmental Quality [was contacted], and they

got in there and got that thing shut off. I caught a trout out of that spot and that thing just smelled like gasoline. (*Yellowstone County Recreationalist*)

I know agriculture has probably polluted it to a great degree. Sewage plants like the one in Billings has got to have some affect on it. The power plant, we've got a couple of refineries....It worries me that they could ruin the river for longer than I live....That bothers me. (*Yellowstone County Recreationalist*)

Warm water has got to be tough on everything, low water. Something else I'm kind of concerned about is the turbidity of the water that comes in from the Clarks Fork. I realize that those boys have got to irrigate, but when they turn their wastewater back in, it's just a mudhole. (*Yellowstone County Recreationalist*)

C. Concern: Warmer Winters

In an ice jam, which we had a severe ice jam here seven to eight years ago, it really changed how the river flows. (*Yellowstone County Recreationalist*)

A lot of summers, we have less water and the streams and creeks are dried up. We are becoming more arid. I would think the biggest changes in the river are due to the climate change. Some of that is man-made. We are changing the water cycle and are changing the quantity of water on this planet. You don't see huge chunks of ice on the river anymore. Most years it doesn't even freeze up. We have already done damage to the planet [and] the river. That is why we need to take such good care of it now. (*Yellowstone County Recreationalist*)

D. Concern: Water Rights

We have to stop wasting water. I see my neighbor running the sprinkler in the middle of the day and 90 percent of the water is just evaporating and not getting into the ground. We are so extravagant in so many ways. We are extravagant in the way we live and the way we use water. We have to be more a lot more conservation [minded] if we are to survive as a people. (*Yellowstone County Recreationalist*)

I hate to see us paying money to pump the water clear out to the middle of nowhere and not charging for that. I think we need tiered costs of services in our planning....People who get their water pumped clear out to Ironwood need to be paying more for their services,...instead of everybody paying the same rate. [Ironwood is] a long way from the river....We need to be more conservationist in our development. (*Yellowstone County Recreationalist*)

E. Concern: Dams and Diversions

Another conflict would be between power generation and wanting to use more of the water for power generation and also for cities...and agricultural diversion dams....It's not too much of an issue right now, but in ten years..., I think it might be. I think there will

be conflicts of development versus leaving the river in its pristine character. (*Yellowstone County Recreationalist*)

I don't think that the river should be dammed....Most of the damming we have done hasn't helped. We dammed up the Colorado so we could irrigate California and they paved it over and built houses. I am opposed to a dam. (*Yellowstone County Recreationalist*)

Every 15 to 20 years, you hear somebody talking about maybe they ought to dam the Yellowstone, but that's not an option ever. (*Yellowstone County Recreationalist*)

I hope it continues to be the same. I can't imagine that they're going to dam it because it is the last major, longest free-flowing river in the United States. Hopefully, they are not going to impede the way it works its magic around here. (*Yellowstone County Recreationalist*)

Big Horn River to Laurel: Residential Interest Group Overview

Sixteen interviews were conducted with property owners holding 20 acres or less of land bordering the Yellowstone River, or within 500 feet of the bank. Names were obtained through a GIS search of public land ownership records. These names were randomized within counties. Other people living very near the river and whose primary incomes are not generated by agriculture were also recruited.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|---|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Big Horn River to Laurel: Residential Interest Group Analysis

I. *Living Near the River*

A. *Appreciating Scenery, Wildlife, Serenity and Play*

But in Montana—hunting, fishing—we ride in the mountains a lot. We are horse back riders....We like outdoors. All our recreation is outdoor stuffs. (*Yellowstone County Residentialist*)

I've always gravitated towards it because it's always relaxed me....My church is the river....The fog comes up off the water....The sun pops up and your line is singing out there and you look down and see the little crystals on it, then I look down and see a herd of elk crossing a couple hundred yards from me. It gives you....It's what drug addicts are, the reason they're drug addicts....It gives you that feeling...with no side effects,...other than you're hooked....I'm not leaving here....This is a place to keep forever. (*Yellowstone County Residentialist*)

[We see]...eagles, ospreys, [and] we wanted to make sure they have places to stay so they can come and entertain us, which they do, constantly. It's just amazing....It's fun to watch them battle the eagles when there's a catch in one of their claws....I didn't realize that an eagle could actually fly inverted with the fish—you know, roll over on its back in flight to address the threat. It was wild. Oh yeah, I'd have a \$100,000 tape if I'd have just had the camera. (*Yellowstone County Residentialist*)

I've floated it, fished in it, ice skated on it, done just a little bit of everything....The Yellowstone is pretty nice, too, especially if you like to float. (*Yellowstone County Residentialist*)

I describe it as pretty....Where we live is within a riparian area, close to the river and next to our alfalfa fields....[There's] a lot of wildlife and [it is] just a pretty area. (*Yellowstone County Residentialist*)

This is good habitat for the deer and stuff; there's a lot of whitetail. I spooked up a little fawn when I was coming in....It helps support an awful lot of the deer and bird and water fowl they come in and out of this area [and there is]...a lot of fishing in this area too. (*Yellowstone County Residentialist*)

[I] absolutely adore the choice of the location....It changes daily....It's alive....I would say that I'm one of the luckier guys in the world to have this view,...this untamed river that I always brag about....There's two of my [Canadian geese] parents out here going down with 12 of their babies....We see all the ducks, ...the muskrats and the

snakes....We'll have an eagle fly by and an osprey dive in the river....I'm a happy guy here. I've never worked a day out here, but I've sweat and toiled a bunch, but every bit of it has been so enjoyable. (*Yellowstone County Residentialist*)

We enjoy boating and swimming and doing stuff like that. (*Yellowstone County Residentialist*)

It is beautiful along the river and fun for kids....[It's] peaceful....We sit out on that patio in the evenings and listen to the ducks and the geese and watch the pelicans in the sky....[We see] beavers in the river,...marmots....The deer like to run through here....The river islands now have turkeys on them....[We're] seeing the turtles....The river is...unique...and it's free-flowing....It's a beautiful river. (*Yellowstone County Residentialist*)

It's beautiful....It's located on the slope that drops down to the river bottom....Since the house was elevated, we get a great view of the river and the water fowl on the river and the deer in the pasture and the pheasants in the yard and all the other great things that go along with living out in the country....I love to watch the ducks and geese and pelicans and the critters that habitat the river. (*Yellowstone County Residentialist*)

It is just a raw piece of land so it is a recreational piece of property at this point....It is a nice piece of ground on the river....I love the river....I like to jet boat....It is scenic....There is a lot of river there. It is a huge asset to this state. There are so many opportunities. It is a great playground. (*Yellowstone County Residentialist*)

[The place is] on the river and close to town. Quiet....There is a lot of wildlife, a lot of birds....We always have geese. They bring the little ones along the bank....There are eagles nesting across the river straight over here....There are a few ospreys up the river. There are a lot of beaver, quite a few pheasants. (*Yellowstone County Residentialist*)

I like the river a lot. I like to fish and float and the wildlife. Ever since we've lived here we've always done things in the river. I mean, it's been a part of living here since we moved....Deer, owls, eagles, beavers—we had a beaver scare when we were floating a little bit ago—fox, raccoons. (*Yellowstone County Residentialist*)

As far as our livelihood goes, the river doesn't play any part. It's more part recreation and status for my husband. He's lived in Montana all his life and living on the river is something he's always wanted to do. (*Yellowstone County Residentialist*)

I enjoy it for recreational purposes. (*Yellowstone County Residentialist*)

I was going to say recreation, but it's not recreation: it's a refreshment, a rebuilding time. I bought this when I was still working full-time, and working with people and you're uptight, [and] you come out here [to the river] and can renew yourself. Even busy working, irrigating, it's a great way to refresh yourself. (*Yellowstone County Residentialist*)

B. *Keep the Yellowstone Natural*

The big argument has always been, ‘Dam it or let it run free’....There are always advantages and disadvantages. (*Yellowstone County Residentialist*)

This is a 759 mile-long river, the longest river in the lower forty-eight [states,] untamed by any dam....I would not be opposed to a dam. I’d probably say, ‘You’re not going to flood my land, are you?’ like everybody else would. It would be a great recreation deal...[but] I think the river is somewhat manageable even without a dam....I feel just a little unique saying that I live on this 759-plus stretch with no dam, although it would make a hell of a recreation area if it had one. (*Yellowstone County Residentialist*)

[Keep it] free from dams. I think that’s really important. (*Yellowstone County Residentialist*)

I don’t know if ever there could be a dam where they use power, and I know this is the only river in the United States that’s free-flowing. To take that away....I’m for it at times, and then I’m not because of the free-flowing. (*Yellowstone County Residentialist*)

They should have built a dam at Livingston 100 years ago in Paradise Valley. The whole river would have been beautiful. What a fishery it would make for 500 miles. Plus, they would get hydropower and the reservoir. Now it is just a lot of rich people in Paradise Valley. No way would it ever get done now. (*Yellowstone County Residentialist*)

Put a dam in at the top, [and] that’d be the end of [the river changing course] (*Yellowstone County Residentialist*)

For all the trouble it is, I still like the idea of the Yellowstone just running free. That’s more about the aesthetics and the recreation thing....There’s a lot of stuff,...the wildlife, the floodplains, the swamps, all those things you have because it runs free. All the changes it has from year to year. It’s really important....I can see the dam....There will be a lot of advantages to control the flow of water. But I think we are back to economics....Irrigation—there needs to be more ditches. No flooding if you have a dam to control it. Plenty water for the growth [for] all these cities. (*Yellowstone County Residentialist*)

C. *The River as a Shared Element of Life*

It is the lifeblood of the valley....It keeps a lot of farmers in water and able to grow crops and it’s a good source of recreation....I have a boat that was made for river use; it’s got a jet on it. And I’d rather boat any day on a river than on a lake. It’s just so much more fun. It provides a lot of habitat for wildlife that is fun to watch and fun to hunt....Fish are fun to eat and catch. So it’s a wonderful thing for this valley. (*Yellowstone County Residentialist*)

In Eastern Montana, water is critical to everybody any more. So, we are well aware of the river. (*Yellowstone County Residentialist*)

We do a lot of recreation, and, of course, the water wells and the irrigation.... You know, we used to see jet boats and some floaters.... There's a lot of fisher people.... There's a lot of cattle down there. (*Yellowstone County Residentialist*)

Farming, ranching, and recreation. That is basically it.... I have to admit there are more people on the river. There is a lot of river there and you can spread a lot of people out and never bump into too many people. (*Yellowstone County Residentialist*)

Everybody [uses the river]. The Yellowstone River feeds Laurel's water system. I believe it feeds Billings' water system, and since that's a necessity of life, I would say everybody [uses it]. I know a lot of the farmers around use it for irrigation, and I would like to figure out how to do that as well. We have an irrigation ditch.... [And] recreation—...there are so many people out there who fish and boat. I think there isn't anybody that doesn't depend on it. (*Yellowstone County Residentialist*)

D. Ruralness

I have lived in town down here for years. And I just wanted to get out of town and have some cows and horses. I always kind of liked that. (*Yellowstone County Residentialist*)

We're right along side the river.... We just love the area out here. We didn't want to be in Billings... We do a lot of fishing and hunting and floating and, you know, that kind of thing, and rafting.... Just the trees, and that there's nobody between us and [the river] so it's quiet. Solitude. (*Yellowstone County Residentialist*)

We just love the bedroom community.... I mean, it's very quiet we don't have any noisy neighbors. We don't have to worry about any of that. And we have an ideal spot right here. We are next to the river. It's great, you know. (*Yellowstone County Residentialist*)

It's more private, because we're surrounded by our land, and quiet: we're not by traffic. And it's by the river. (*Yellowstone County Residentialist*)

Privacy: Even though we're right here on the road, when you get back behind the house, nobody can see, and all you can hear is the water, and it's very private. (*Yellowstone County Residentialist*)

I think we've got a pretty nice place. The location is good. We're into Billings in 15 to 20 minutes, [on] paved roads.... We are out of town, yeah, it is pretty nice.... We... plan on living here, [and] dying here, basically. (*Yellowstone County Residentialist*)

E. Development

We're losing more farm ground every year for people to build on....It's going to grow. If they get a sewer system in here, it'll grow. It's grown a lot now, all these houses down here are new. There's a block over here, there's three new houses on it. (*Yellowstone County Residentialist*)

We're seeing some development with the golf course; that's bringing in quite a few more houses. And we get a lot of people out here that are bedroom community. You know, it's a bedroom community so we get a lot of people that don't want to be in Billings. It's cheaper out here. You don't have to pay the city taxes, so I expect that we'll see some development. (*Yellowstone County Residentialist*)

This has been recently zoned where they can cut it to five acre lots. I think that will happen, not only at our place....I think when the kids inherit things, they may not want to live here, they got their own lives, so they'll sell. Whether they sell it all in one piece or not.....Some of those places will start to get broke up. It will all be residential. (*Yellowstone County Residentialist*)

II. The River as a Physical Element

A. Living with the River

It's a vigil every year to keep up with the river, to see if it's going to take out some more of the property. It's a living creature, that Yellowstone. (*Yellowstone County Residentialist*)

The power of that river....The water come up over that bank, and it just rolled. It was like a big roller coming at you, and it was the water coming over the banks, and the force of it, when it moved that huge ice up on the land, and it came around there, and it went all the way up to the neighbor's house before it broke. And it broke fairly fast. (*Yellowstone County Residentialist*)

I wouldn't say it is any abnormal erosion....It is the natural way. It needs to change and move where it wants to move like it does. (*Yellowstone County Residentialist*)

Everything that we've built down there had a three-and-a-half to four foot high level in preparation for the next flood, which isn't a question of *if* it's going to happen—it will happen. We're prepared. (*Yellowstone County Residentialist*)

[We're] just worried about floods every year, because we are right on the water. (*Yellowstone County Residentialist*)

Ice jams are actually the worst for us. They don't last long, but, boy they are quick....Three or four years ago, [our neighbor] had his horses in there. The river is pretty close down there....I went home to get something....I see him running back and

forth, he is trying to get his horses out. He is in waist-deep water just like that. Big chunks of ice...[and] your spring floods, you know they are coming. You don't know how high or anything, but you know so you can be prepared for that. (*Yellowstone County Residentialist*)

The ice does clean the river up....It gets the moss off the bottom, cleans the dead trunks out, does everything....So if you stop the ice flows, the river's not going to be as clean....[It's] Mother Nature's way of cleaning the stream. (*Yellowstone County Residentialist*)

B. Stories of Destruction

My dad grew up fighting the river because it eroded so much....So the river was always a pain in the butt because his farm land the river was taking away....[In] '98, or '97...[there] was one of the biggest ice jams this place had ever seen because the ice jammed totally the river off around the bend. And all that water and ice came through here and we had eight inches of water in our house....We went up to the neighbor's and watched the water come higher and higher and watch it get to the top of the porch. (*Yellowstone County Residentialist*)

It was a combination of a lot of snow melt and heavy rains that caused the flooding. Our neighbor did get water into their pasture, but it never got into ours. But it took a lot of the bank away between our ditch and the river. Now, each year, the river every time it goes up, it erodes more away and it's caused some real problems. In fact, at that same time it ...washed out...our irrigation system. (*Yellowstone County Residentialist*)

This house used to sit down there where the pile of dirt is. I had to move it.... High water came and washed the bank away....That was the 200-year high. There used to be an island down there about 100 yards and the 200-year high took it out. The next year we had a 500-year high and it went right by me because the island wasn't blocking me....[That second year it washed away 100 feet of bank and] the river was running right by the whole south foundation.... It cost probably upwards of \$40,000 [to move the house]. (*Yellowstone County Residentialist*)

You can get an ice jam up there...[and] so the river just takes off and it's running 13,000 cubic feet a second. It is a great digger and carver. (*Yellowstone County Residentialist*)

I couldn't even say [what was lost to the river], not in acreage....I lost a huge tree,...no roots or anything, and it probably took 20 feet of our fence. (*Yellowstone County Residentialist*)

When it starts cutting in it,...water is relentless. (*Yellowstone County Residentialist*)

When they start having big ice flows again,...this entire thing will be eight to ten feet thick in ice that will be exploding and cracking, and it can crush a car in a heartbeat. It breaks rocks....And that water doesn't stop....There will be ice 15-, 16-, 18-feet out from

the bank, just packed in against the banks. And all that ice then cuts loose and just slops into the river, and it comes down the size of buses....You've got something that's moving five, six miles an hour by water, and it slams into stuff, it changes a lot of things.

(Yellowstone County Residentialist)

C. *The River Changes*

And then the river decided for some reason [to] move across—up against the bluff—and so now the river has become a smaller channel here....I think it had to do with maybe the ice jam. *(Yellowstone County Residentialist)*

As the river changes, the fishing holes change, and the river changes about every year. *(Yellowstone County Residentialist)*

And, you know, it widened out the river so much with that flood the last time, there was so many trees and stuff that went. *(Yellowstone County Residentialist)*

Lots of changes. There used to be just a small channel that...would get water in it during high water and then, when the water went down, you could actually drive out on an island. It was pretty large. And I used to be able to launch my boat down there....It was one of those years when we virtually had a 100-year flood. *(Yellowstone County Residentialist)*

Ice jams are a big factor. They probably change the river more than anything. *(Yellowstone County Residentialist)*

My next door neighbor...tells me he used to drive their old Ford truck over to the island. The deepest [the river would be] in the fall would be two and half or three feet deep. We've sounded that and we know it's eight, ten, 12 feet deep with some deeper holes....Somewhere back in late-'80s, early-'90s the river took a turn, and, instead of going on the other side of the island, ice jams and blockages of one form or another carved the river over here. And we know it's been here because everything here is a product of river sediment over the last million years, and it goes back and it goes forth. *(Yellowstone County Residentialist)*

I figure things change when the ice comes. Ice in the middle of winter—that's what happened here. There was a big ice jam here....And it changed the channel. [It] used to just make a big sleeper here, then it turned it and it came 90 degrees right above this guys house right above into our bank....Now, guess where it's going again? Wrapping around, so it's changing back. *(Yellowstone County Residentialist)*

There's always gradual change, but in a high water year, it could happen in one year, in one season....The boat ramp was carved out a little bit more this year. So there's more water over there this year in that channel, whereas it was one the other side last year. So, it can happen,...like I said, in a season. And it's always happening gradually. *(Yellowstone County Residentialist)*

Although that channel has changed over the years, it's gotten deeper and wider in my estimation, just natural....The main channel used to come down and hit down here and then go out. That has changed. (*Yellowstone County Residentialist*)

Yeah, there's a lot of water there....The main channel is on the other side of that. This is all filling in....What will happen is...they'll have another major ice flow and it will hit the back end of this island and it will start shooting it into this thing here and this will all just get washed away and then it will be going that way. (*Yellowstone County Residentialist*)

I think that the ice flows that will happen...are going to change the direction...and the entire ecosystem....They've done it before, and they're going to continue to do it. And every 20 to 30 years, something major happens. (*Yellowstone County Residentialist*)

D. Building in the Flood Plain is Foolish

People...call it a flood plain for a reason, and if people want to build in the flood plain, then that would tell me that you're going to get flooded. (*Yellowstone County Residentialist*)

We were smarter than the people [building] across the way. You can't tell what the river [will do]. (*Yellowstone County Residentialist*)

I'll tell you where the water was one time. Remember when you drove by here? It was right up to the highway. I was here with my fins on....This road in here is new. They built it up higher, thank God. It saved us there, but here, coming around the corner, there's nothing there. The river...[doesn't] have to rise very much to get over and flood. (*Yellowstone County Residentialist*)

If somebody's going to build in the flood plain, they should sign something, 'I'm building in the flood plain. I'm willing to take the risk. I know what the implications are and I don't expect the government or my fellow Montanans or anybody else to bail me out if things go wrong.' (*Yellowstone County Residentialist*)

The house sits on a .97-acre tract and it is in the 100-year flood plain. The three and a half acres that surrounds it is in the flood plain...and the 30 acres down below is in the flood plain...We've seen a lot of water come through the overflow channel which according to the Army Corps of Engineers is telling me is what's keeping from flooding my place. (*Yellowstone County Residentialist*)

[When building near the river,] be careful. Come and see me. I am not in the flood plain. That river is 30 feet below the deck. When the water comes up above the gravel line, the dirt just tumbles off in the river. (*Yellowstone County Residentialist*)

That's basically is a flood plain, and I'm not sure what the flood frequency is here, whether it's 100 or 500. In the 30 years I've been here, I've never been flooded, but the

lower piece down by the river is the one that's been flooded. (*Yellowstone County Residentialist*)

Zoning [is a problem]...because they think we are in a flood plain....[And] because you have all the rules with a flood plain. Cripes, this house was built...after World War II....Water's never, ever come within 20 to 30 feet to be raising high enough to flood us, but we live with all the rules of being in a flood plain....And, actually...in certain areas here, you can't even build a house because of being in the flood plain. These restrictions are due to all of that. (*Yellowstone County Residentialist*)

I think there's a lot of guess work that goes into those flood plain maps, frankly....I think there are probably better ways now through GPS technology that they could very closely identify whether it is in the flood plain. (*Yellowstone County Residentialist*)

The photos are of great value to see [past flooding], but I think since that flood in '97 the river has actually changed course and you can see that in the photos from year to year. Historically, the water hasn't come up that far, but since the river channel has changed a little bit in that area and we have lost some land, even last year we lost a big chunk....I can't say what would happen in the future. (*Yellowstone County Residentialist*)

E. Rip-Rap is a Known Solution

[Regarding rip-rap]...it would take a whole heck of a structure to hold up against an ice flow when the ice flow comes down. (*Yellowstone County Residentialist*)

The river's the banks. I mean people do raft on these all the time, and you know there's nothing worse than going by old car bodies. (*Yellowstone County Residentialist*)

I know they don't let you put concrete in the river anymore. I don't really understand that and nobody has explained it to me, so I guess I'll have to figure that out. (*Yellowstone County Residentialist*)

I've been thinking about getting some huge landscape rocks and putting them down there along the bank, just on top of the bank. I understand that concrete blocks and concrete rip-rap are out now because of the lime and all of that other stuff. So you got to come up with some kind of alternative. (*Yellowstone County Residentialist*)

Rip-rap in key locations in the river is really important for landowners. If they're not able to rip-rap, they're going to lose land. (*Yellowstone County Residentialist*)

I don't know where he got those boulders from. He put some money into it, [and] he was able to get a pretty good tax break when he put those big boulders in the river down there....You've got to use rocks big enough to withstand heaving force of water, especially ice....[The rocks are] aesthetically pleasing....In fact, you'll hardly see them because the vegetation has covered them up now....If it hadn't been for that rip-rap, I

wouldn't own the land that I own now,...because the river would be in the middle of this field down next to the river. (*Yellowstone County Residentialist*)

We converted it all to grass and in order to conserve the banks. We've let [the] creek grow wild and planted trees along there and planted shrubs and bushes to hold [the bank]....Those [cottonwoods] are just seven years old....And these guys are 70 years old, these big ones here....They just do so well down there and anything that grows on the bank I just encourage it's growth because it holds the bank. (*Yellowstone County Residentialist*)

I guess if I had problems I would want the opportunity to save my investment. [Rip-rap] makes for some good fishing. You have rocks and boulders that give the small fish a place to hide out....It is a hiding spot for the littler fish and a resting spot for the bigger fish if they can squeeze in between the rocks. (*Yellowstone County Residentialist*)

[Rip-rap is] the only way they can save their land, you know. A lot of them dump rocks in there. When they first started, they'd dump cars in there, but that was outlawed so they couldn't do that. (*Yellowstone County Residentialist*)

I don't think [rip-rap] would be effective—not on a curve like that ,because I think eventually it just...gets behind the rip-rap, [and] you end up doing it again. So I don't believe rip-rap is the answer. (*Yellowstone County Residentialist*)

He stopped it [with rip-rap] from coming any closer. It probably got,...I'd say, about 40 feet from our barn. And he kept it away that long and kept it from getting to the dairy farm. And when my husband and I moved back it was still dangerous and then all the laws of the environment that you couldn't do nothing but just watch it. So, it was kind of scary for a few years. (*Yellowstone County Residentialist*)

When they came in and put...those rip-rap fingers,...in...I think they did a pretty good job with that....They called them fingers at the time, but they're like little levies or dikes. (*Yellowstone County Residentialist*)

F. Weirs as an Alternative to Rip-Rap

We actually looked at using rip-rap. We used to do a lot of rip-rap work....And it was just lining the bank...[to] keep the bank from eroding, but you don't...really do anything about that. The weirs...actually slow the water down next to the bank and you don't have to line the entire bank with rock or concrete....So it will fill back in with grass and trees....It looks much better when it's done and matures. And it is less expensive than lining the bank in its entirety. We just felt that was the best option. (*Yellowstone County Residentialist*)

We put weirs in....[They were] incredibly successful....If it is done right, it works very, very well. We spend a lot of money and time and energy enhancing wildlife on a property like this that we are not compensated for. We do it because we like to....I spent hundreds

of thousands of dollars doing the project we did on the river, doing the weirs the way we did it, engineered right. (*Yellowstone County Residentialist*)

[Weirs] are a good idea. A guy...just put some in a while ago. They seem to be helping a lot....In some cases, [weirs are preferable to rip-rap]....[Now,] putting a weir in still causes an eddy behind it that I think would cause some erosion when the water gets that high....You can see some kind of scalloped areas behind it. But it does push, helps push the current out away from the bank. (*Yellowstone County Residentialist*)

Bendway weirs...[can] angle the river 20 degrees and they gently move it across to the other side....It's moving the river....You can just see how it hits the first one....Then it subtly moves it out to the second, third, fourth....My experience has been the weirs create habitat. There's more fish behind the weirs....The weirs...are a blessing that's not intrusive, creates growth, creates fisheries. (*Yellowstone County Residentialist*)

There's weirs all the way around this curve [to protect the bank]....We haven't really had high water yet so can't say [how effective they are]. (*Yellowstone County Residentialist*)

I'm living with the river and coping with it. As long as I can do some weirs, I have enough land and grass....If I left it unchecked, that river will be in this creek in less than 50 years. (*Yellowstone County Residentialist*)

G. Rip-Rap and the Potential For Unexpected Consequences

There [are] guys that put in little rows of rocks and stuff to push the river away from their bank, so it's going down like this. This guy does it, this guy does it on this side, so it kicks up more that way from them doing that....It pushed the river that way, so then those guys over there pushed it back this way. (*Yellowstone County Residentialist*)

I don't agree with people messing with [the river] so much to the point [that] when they filled it in over there and the river drastically came over here. I'm just afraid of things like that happening and losing more land. And, maybe not generally just for our land, our neighbors, as well....It changes a lot. A lot of that is because it was natural, but some of it because you know people decide to take it upon themselves to change it. (*Yellowstone County Residentialist*)

III. Frustrations with River Management

A. Agencies Need to be User-Friendly

All he wanted to do was rip-rap to save his bridge....At one time, he had 20 guys standing down there on his bridge, discussing what he should do. Bridge finally washes out and down in the river it goes. The next day, to save the road, they are hauling big boulders, dumping them in...and, of course, in the spring he had to haul his bridge out. That's required....But, there you go. When you're dealing with water, you're dealing with a lot of different people. (*Yellowstone County Residentialist*)

The only problem we had was the reluctance on the Army Corps of Engineers and the DEQ to get [the weirs] done. It took us two years....We probably lost 30 acres and an eagle's nest. To me, that is very disappointing. The lack of vision on the part of people that think the river has to be natural and nothing else works....The length of time and meetings it takes and attitude of, particularly, the DEQ was very difficult. Some of the people in the Corps were very reasonable; some were not that reasonable. The DNRC in town was very good as far as helping us. But their hands are pretty-well tied. They wait for all of the bigger agencies to deal with it. I think they make it so difficult that people just don't want to do it right, frankly. (*Yellowstone County Residentialist*)

My husband wants to build a pond out front and he would like to put a boat ramp in the back, right on the river....We haven't really seen a lot of requirements, other than they want to know what we're doing, exactly how we're going to do it, and what we're going to use when we do it, which I can completely understand. They don't want us messing stuff up. They're pretty particular about what's going to be used and what's going to be done....They even want to know how we're going to restore vegetation after we're done working. (*Yellowstone County Residentialist*)

I petitioned every agency that you have to...to build in four weirs...[in a] series, [which] is what works them gently out....We went through four or five agencies to get this done, and write this down. The Corps of Engineers was the slowest moving, hardest to....just follow up. I tried to do everything,...[to] get engineering drawings, pictures, whatever. It took forever for the Army Corps of Engineers to move. Bless their heart, they did. I was good friends with the gal that ran this deal out of Nebraska, and I certainly knew her on a first name basis and her birthday, because I talked to her every other day. I asked her where it was and she said it was sitting on somebody's desk. (*Yellowstone County Residentialist*)

It took us two years to get it permitted to do it right....We lost 20 to 40 acres. Had we...done it without the permit, we'd have saved that land....We stood down on the river bank looking at the project after we did it...[and] DEQ guy was complaining about a couple of inches variation in elevation....Yet we looked across the river where they had dumped in car bodies and concrete without permits. I said, 'How can you give me a bad time about doing it right, but being off a few inches in elevation, when you can stand here and look across the river and not do anything about what everybody else is doing?'If I've got a permit...he's going to make it miserable for me. (*Yellowstone County Residentialist*)

That flood, it took probably three or four acres of ground where our irrigation system was and just completely wiped out our source of water. And we had to go through a quite a lengthy process of going through the Extension Service and the Conservation District and State of Montana...Corps of Engineers...to get permission to...lay an underground culvert farther up the hillside and tie it into that system at another point and rebuild our irrigation system. (*Yellowstone County Residentialist*)

I really think that the authorities should be more flexible in allowing landowners to protect their property. It's such a hassle to go through all the steps it takes to put rip-rap on your property.... There has been hundreds and hundreds of acres lost here.... I feel for the larger landowners that have a lot of river frontage that lose a lot of property every year and really can't do too much about it. (*Yellowstone County Residentialist*)

Make a comprehensive plan as to what is allowable and a process to permit it with ease, rather than fighting every step of the way.... You get it so difficult, people just say, 'It's not worth the energy [to get the permit.] We'll do it anyway,...[even] if they put us in jail.' And I can't blame those people. (*Yellowstone County Residentialist*)

Make the rules a little simpler, and let the people save the land [with rip-rap]. I mean, it is such a headache. I don't know if they straightened it out, but it used to be a dozen different government agencies you have to deal with. (*Yellowstone County Residentialist*)

I know you have to jump through a lot of hoops [for the permits]. The Corps of Engineers is one, the County is one, [and] Fish and Game. (*Yellowstone County Residentialist*)

The only problem I have with the river here is there is no protection for us that live here in town. This is just a small bank here that goes around a corner. We tried to get them to do something, but they never have.... They'd have to put in a dike there. There's no way out of it. There was talk about doing that. In fact, the county commissioners were going to do it one year, then I don't know what happened. The bottom fell out of it. But there does need to be something done. (*Yellowstone County Residentialist*)

B. Rules Should Be Fair and Enforced

And then you get people across the river or downstream that just throw concrete on the edge of the bank, let the river bank wash out, the concrete falls in and looks like hell and they don't have any problems and yet I got hassled the whole way trying to do it [bank stabilization] right. And that is very disappointing to me. (*Yellowstone County Residentialist*)

I think the restrictions of what you can put on the riverbank has gone a little too strict. I know that you don't want to make it yucky looking, but it seems like...they're getting too touchy on it. (*Yellowstone County Residentialist*)

I don't think you can ever stop them [from littering] because you can't get enough cops to enforce it just like you can't get enough to watch the river. You have to change people's attitude if that's even possible. (*Yellowstone County Residentialist*)

Some people over here a couple years before took a CAT and put up a big berm over there and it pushed all the water over here. I contacted some people and nobody would do anything about it. (*Yellowstone County Residentialist*)

They change the rules. Like if we want to do something in the river, we have to go through six agencies to do all this crap. Laurel was having trouble getting water. They just take bulldozers and drop them in the water and do whatever the hell they want. If I did that I would have been fined quite seriously. So they don't enforce the laws equally either that do exist. (*Yellowstone County Residentialist*)

When that old boy started moving dirt around down there, someone should have done something about that. I called and nobody would do anything. This happens a lot....I have been up and down that river a million times and you can see where people have moved the bank around. (*Yellowstone County Residentialist*)

C. Management Practices Should Meet Residential Needs

I appreciate the chance to talk to you. Hope it will do some good. If they can understand our needs down here, that would be great. (*Yellowstone County Residentialist*)

[The] best manager that I've ever seen—it's been the common farmer. (*Yellowstone County Residentialist*)

I guess they can put the ear muffs on [if they don't like the boat noise]. We have been running the river forever. Now they build a house there and want us to change....The four-stroke motors are coming into play now due to new laws. There are two-strokes that are louder, but they have them running pretty clean. Give it ten years and it will be predominately four-strokes and at that point it will be quieter....If I build on the river, I am not going to complain because I chose that and I know it could be an issue. (*Yellowstone County Residentialist*)

I just disagree with that whole concept of habitat management. I don't think it needs managing. I think it needs maintenance....Managing the river itself... would sure be nice rather than spend money trying to figure out which way to make the river go. It would be really nice to get the dead stuff out of here, because it is...a fire hazard. (*Yellowstone County Residentialist*)

Co-op funding from the Federal government or the State government...would certainly help. Even if you are not getting reimbursed for all of [the cost to stabilize the banks, we need,...]...participation and encouragement to help you do it, rather than no participation and discouragement. I think maybe a lot more people that live along the river would do it knowing they could save land from being washed away. (*Yellowstone County Residentialist*)

[River management is] huge....[It should come from] someone that doesn't profit from the management itself, or someone who doesn't garner any kind of political votes....You've got to start somewhere,...[but] you're going to be infringing on people's rights. Especially Montanans. Out here, we're kind of out-laws....We'll do what we want within the parameters of the law. And, you start putting more rules and regulations on [Montanans] it's not going to work. (*Yellowstone County Residentialist*)

We hear a lot of complaints from fellow boaters and fishermen concerning the dams....There are not any very technical systems for those fish to be able to travel like they would normally. I think it has really affected the fishery. They could make it better....You could have a canal around there where the fish could get through. As far as boaters go,....if they could make a spot in the middle that would stay deep enough to pop over. I don't know. A lot of them have a cement pad and underneath giant boulders. (*Yellowstone County Residentialist*)

I think [the access] should just be a day use, because at night there's no way you can get boats in. And it's just the kids then and the people that take advantage of the land and aren't really fisherman that would enjoy it. (*Yellowstone County Residentialist*)

I don't think it's the right river to dam up. But I think the State and Federal government should work more closely with the landowners....And I'm not talking about making the river a straight channel all the way from Yellowstone park to the border, but give them a better chance to protect their land...and keep their irrigation systems in tact....I think there should be a little bit of Federal or State help for people that get in that kind of situation. (*Yellowstone County Residentialist*)

I would hate to see it come to a deal where you couldn't make use of [the river] with a motor. It would be a shame. It is such a great resource. It is big enough and if you keep [the boat] full speed and go by you don't leave a wake. If you slow down you really put out a wake. I know I went past a few that probably thought I was going too fast, but if I were to slow down it would be a big wave. I would get as far as I could away from them or shut down and let them go by. (*Yellowstone County Residentialist*)

I guess my biggest concern would be to lose any [boating] privileges that we currently have....If you get enough canoers and kayakers together to get the river to themselves, that would be a big deal to me. (*Yellowstone County Residentialist*)

They need to choose areas [for public accesses] that you can really move up and down. It's a waste of money to have them in the wrong spot....Because the high water mark is right to the edge...[and you have] the concrete down there that's really unsafe to walk on or you've got a 12-foot bank....You have to get up and over the high water mark to get around and that's illegal. So if they did choose any kind of more accesses, they need to find the spot where they can actually get around a little bit. (*Yellowstone County Residentialist*)

I like [the high water mark] because it allows you on the river and then it also allows the landowners...to get nasty if you get out of it or above it....So, as long as you pay attention, you're fine. (*Yellowstone County Residentialist*)

IV. Other Problems

A. Water Quantity

I imagine the day could come, but it seems like we have sufficient amount of water, even with the drought. (*Yellowstone County Residentialist*)

The big thing for me is the low water, the low water levels, but I'm not sure at this point what you can do. There's not a lot upstream that you guys can do to force it down stream. You know we rely too much on the snowfall. (*Yellowstone County Residentialist*)

If you believe in global warming, I think [lack of water] will be a problem everywhere....There is apparently some evidence that there is getting to be too many people. (*Yellowstone County Residentialist*)

We have had some really dry years. That river right now is flowing half of what it should be. (*Yellowstone County Residentialist*)

Maybe [we should be] setting limits on how much water people can use a month....Make it a...law, or vote it on because I think if it came to that...a lot of people, at least I hope they would, understand the problem and want to vote for limited water use....[But, then] everybody's going to look at it for their own interests....It's just not an easy issue....[The farmers] have water rights, you know....And, that's the law, so unless you change the law, that's how it's going to come out. (*Yellowstone County Residentialist*)

There won't be [enough water] in 100 years. There won't be enough. (*Yellowstone County Residentialist*)

I think the Yellowstone actually moves more water per year than the Missouri does....Speed is the difference. The Yellowstone flows pretty fast and then in high water it really rips....It'll fool people....I think the Yellowstone has been able to supply so far, although it's gotten low, really low sometimes....[In] August, September,...it drops off substantially. (*Yellowstone County Residentialist*)

There's not a lot of water in Eastern Montana. It's a touchy subject....You get away from the Yellowstone,...up on the rims and stuff. Those people are hauling water to their houses....And we ran into the deal...by Fort Peck....They have to allow so much water to go down stream all the time. That is determined by the Army Corps of Engineers....We don't get to control that. Now, they can't say anything on the Yellowstone, because it runs free...but what you worry about, the next step is they come to Billings and say, 'You can only use so much water, because the rest has to go down stream.' Then the fight is on. (*Yellowstone County Residentialist*)

We are all hobby farmers....We don't have water....But it isn't our livelihood. [There's] a big difference [than]...if I was growing beets, or hay, and that's how I made my living.

I wouldn't be happy if someone was using the water that was rightfully mine.
(*Yellowstone County Residentialist*)

The first people that should have the opportunity to use water are those that are fighting things like wildfires....Second are the municipalities, and their water systems, so the public has drinking water....Third are the farmers. You know, that's their lifeblood for...irrigation and stuff. And then you finally get down to the rest of it. (*Yellowstone County Residentialist*)

I'd put the farmers before the cities....I think it's probably more important to have crops than to water your lawn. (*Yellowstone County Residentialist*)

[Here's] a case of [a] city...running out of water....Their water intake...is by the bridge. [The] channel changed, like for, three or four years, they spent \$50,000 to \$60,000, got an okay to be out in the river, set up a berm, channeled the water over to the intake. But of course, the powers that be said it was a temporary fix, you are screwing up our river. You can't do that. So we had a big bond issue, it passed....You can't see it, but there are now two intakes. The one that sits up, the cement one, and the one on the south side, which is all under water. (*Yellowstone County Residentialist*)

B. Problems with Public Access

Nine out of ten of those people that...come from a public access are going to trespass....There's four-wheelers all the time that we are constantly reminding them are not to be up on motorized vehicles, even within the high water marks. 'Oh, gee, we didn't see the signs,' 'Oh, really, gee, we are sorry' [they say] after they have been down there tearing up the river bank. (*Yellowstone County Residentialist*)

We need more access so people can get on to fish. People just don't trust people anymore, and we can't blame them....Unless you know somebody, you can't get on ...[so] they fish the bridge down here...[on] both sides, and they fish this corner up here, and they'll walk down the railroad tracks and fish that side, and there's a rancher over here that lets people that he knows on there to fish....[But] it's too close; you've got to get farther away to fish. To catch these here, you've got to go a long ways. (*Yellowstone County Residentialist*)

There's always the high water mark which I really like. As long as you can get on legally, you are legal. I don't believe in the circle the wagon thing neither, buying big blocks and just shut it down. (*Yellowstone County Residentialist*)

[There are] a few hunters that don't understand that you need to ask permission to cross your land to hunt, that's the only problem. Very few people bother me though. I try to get along with everybody. I'll let people come down here if they ask. (*Yellowstone County Residentialist*)

Quite honestly, if they're just pulling off for a few minutes to take a break, I don't really care. (*Yellowstone County Residentialist*)

It's not public access land, but anybody who asks me...I say,...'Tell me when you're coming, and if I say you can fish, don't tell somebody else'....People that I know who like to hunt and fish, they get to know the people. And when they get to know the people, they have lots of places to go. (*Yellowstone County Residentialist*)

I can tell you about the floaters. I've seen them pull up on the edge down there and empty their case of beer and throw the cans. It's just a mess. (*Yellowstone County Residentialist*)

Let me say this [about public access]: If somebody wanted to abuse something on someone's back yard and I'll just clean it up, is that ok? (*Yellowstone County Residentialist*)

The access problem: I would use it more if I had more available access....[The access] isn't the best....It isn't some place you could go down and launch a boat or something like that, or want to....There was another one closer, but when the river changed course that year, it left it high and dry. So it isn't even usable anymore. (*Yellowstone County Residentialist*)

We have had [problems] when the kids used to like to party in the park down here....One time I looked out the window and I saw flames going probably 30 feet up...and it happened to be on my property. And I called the sheriff's department and they got...things under control. But since they've put a lock on the gate into the park, that's pretty much put a stop to that. (*Yellowstone County Residentialist*)

If it was just the fisherman down there, they are no problems. But you get the kids wanting to party on the weekends....That's the people that give you the troubles....[The authorities] check it, but midnight on Friday or Saturday night they're not around when the parties are going and the screaming and the gun shots....We've asked [it to be closed at night], and they won't let that happen. (*Yellowstone County Residentialist*)

There is a recreation area down below here that we get a lot of fisher people in but we've not had any trouble with any of them....If we see somebody down there, we...say, 'I don't care if you have a fire down here....Just put it out. You know you got to be careful what's going on with us up here'....Kids party down there, but that's typical. (*Yellowstone County Residentialist*)

It is not really heavily used. It must just be a responsible bunch using the river. I have never had any problems whatsoever. (*Yellowstone County Residentialist*)

C. Water Quality

We came here, and there was a guy that used the river as a garbage dump. (*Yellowstone County Residentialist*)

Just polluted, people put so much stuff. It's just really dirty. (*Yellowstone County Residentialist*)

I know there's an awful lot of pollution around....My concern is with the refinery, but I have to be careful about that because they were there before I moved in and I know they were there before I moved in....I would like to see the refinery...closed, but that's wishful thinking. Quite honestly, I don't know what they do to [the river], but I'm sure there's something that goes on, even if they say there isn't. (*Yellowstone County Residentialist*)

I think most people are interested in better water quality, if you are encouraged to do it, rather than forced to do it. (*Yellowstone County Residentialist*)

The Yellowstone River really stinks after Laurel. I mean, not that I want to lose the refinery or anything....I don't know if it's necessarily the refinery or if it's just that it's more populated from Laurel to Billings, that stretch. I don't know really what the problem is. But there's no good fish after Laurel....Keeping it clean is my biggest thing. (*Yellowstone County Residentialist*)

D. Safety: Debris and Undercurrents

I also respect it deeply....It will kill you with no malice or forethought. You can go in a heartbeat. You know it is ignorance and stupidity [that] will get you killed....If you got those two mastered, then you're fine. (*Yellowstone County Residentialist*)

It was scary because the current right along here was deep, really deep and it would just swirl and at nights, it was loud from the current because it was fast moving. (*Yellowstone County Residentialist*)

I have the greatest respect for what the river can do. We lost a neighbor here two years ago. He hated the water, but he wanted to cool off and his family encouraged him to get in the water. He jumped in and never came back. We lost a guy off the bridge up here a little bit ago. The fire trucks and police and Sheriff's Department [all came and] I gave them ropes and life jackets. They came down to the river, and we haven't found the guy yet. I sure hope he doesn't come up here. (*Yellowstone County Residentialist*)

It's really high in the beginning of the summer so I try not to spend too much time around, just because it's pretty scary around the bank. (*Yellowstone County Residentialist*)

If you're going to go on the river, you've got to be able to control your canoe because, if you get close to a tree that's fallen into the water, you get sucked under....You're taking a pretty high risk. (*Yellowstone County Residentialist*)

But, I tell you what, as calm as this looks, and I found this out the hard way, because I fell out of the boat, underneath that water, it's moving and you can't stand up or get up or get out. (*Yellowstone County Residentialist*)

E. Exotic and Invasive Plants

We have...sprayed for and dug every noxious weed we can get after:...leafy spurge,...thistle. (*Yellowstone County Residentialist*)

The islands and the shores along the Yellowstone are rapidly becoming contaminated with noxious weeds, [and] leafy spurge and knapweed [are] the two big ones....I think everybody along the river needs to kill the weeds...[because] weeds contaminates the property owners down the stream. (*Yellowstone County Residentialist*)

There's an insect that will kill [leafy spurge]. A good friend of mine owns a ranch...[and has] some beetles that feed on leafy spurge, and he gave me some, but mine isn't concentrated enough now to give the beetles something to eat, so I don't think the beetles are helping me. But they're helping him. And that could be a good solution along this river where there's heavy concentrations of leafy spurge. Those beetles are species-specific; they feed on just the leafy spurge. That's a great way to control the leafy spurge. (*Yellowstone County Residentialist*)

F. Wildlife and Insects as Nuisances

Mosquitoes are really bad down here...The first case [of West Nile] in Yellowstone County was here...on a horse....They're so bad....I was doing work right around the front of the house...and I just couldn't put on enough mosquito spray to keep them off me....I had mosquito netting....I put that on and put a long sleeved shirt on and long pants and my pants tucked in my boots and gloves and that was the only way I could work outside. They were just swarming all around me. (*Yellowstone County Residentialist*)

In fact, the deer are a big problem....I try to grow trees and they have killed some young trees. They killed two last year....They are a nuisance. (*Yellowstone County Residentialist*)

Can we do anything about the mosquitoes?...We have mosquitoes by the jillions. (*Yellowstone County Residentialist*)

All the trees that were probably eight to ten years old were as thick as dog hair down there. So, we thinned them out and I...wanted to keep the biggest and healthiest ones. And as soon as we got half way through that one acre down there, the beavers hit us, and started taking everything....So we had a little on-going battle with the beavers, which I was losing badly....That's what killed the 100-year-old cottonwood out there. (*Yellowstone County Residentialist*)

Yellowstone River Cultural Inventory—2006

Part IV: Laurel to Springdale

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Yellowstone River Cultural Inventory--2006 Preface

The Significance of the Yellowstone River

The Yellowstone River has a long history of serving human needs. Native Americans named it the Elk River because of its importance as a hunting environment. William Clark explored much of the river in the spring of 1806 and found it teeming with beavers. By 1906, the US Bureau of Reclamation was sponsoring diversion projects that tapped the river as a source of irrigation waters. The river then enabled “twentieth-century progress” and today it supports many nearby agricultural, recreational and industrial activities, as well as many activities on the Missouri River.

Management of the shared resources of the Yellowstone River is complicated work. Federal and state interests compete with one another, and they compete with local and private endeavors. Legal rights to the water are sometimes in conflict with newly defined needs, and, by Montana law, the public is guaranteed access to the river even though 84 percent of the riverbank is privately owned.

Interestingly, in spite of the many services it provides, the Yellowstone River in 2006 remains relatively free-flowing. This fact captures the imaginations of many people who consider its free-flowing character an important link between contemporary life and the unspoiled landscapes of the Great American West. As a provider, as a symbol of progress, as a shared resource, as a management challenge, and as a symbol of our American heritage, the Yellowstone River is important.

Purpose

The Yellowstone River Cultural Inventory—2006 documents the variety and intensity of different perspectives and values held by people who share the Yellowstone River. Between May and November of 2006, a total of 313 individuals participated in the study. They represented agricultural, civic, recreational, or residential interest groups. Also, individuals from the Crow and the Northern Cheyenne tribes were included.

There are three particular goals associated with the investigation. The first goal is to document how the people of the Yellowstone River describe the physical character of the river and how they think the physical processes, such as floods and erosion, should be managed. Within this goal, efforts have been made to document participants’ views regarding the many different bank stabilization techniques employed by landowners. The second goal is to document the degree to which the riparian zone associated with the river is recognized and valued by the participants. The third goal is to document concerns regarding the management of the river’s resources. Special attention is given to the ways

in which residents from diverse geographical settings and diverse interest groups view river management and uses. The results illustrate the commonalities of thought and the complexities of concerns expressed by those who share the resources of the Yellowstone River.

Identification of Geographic Segments

The Yellowstone River is over 670 miles in length. It flows northerly from Yellowstone Lake near the center of Yellowstone National Park in Wyoming. After exiting the park, the river enters Montana and flows through Paradise Valley toward Livingston, Montana, where it turns eastward. It then follows a northeasterly path across Montana to its confluence with the Missouri River in the northwestern corner of North Dakota.

Five geographic segments along the river are delineated for purposes of organizing the inventory. These five segments capture the length of the river after it exits Yellowstone National Park and as it flows through eleven counties in Montana and one county in North Dakota. The geographic delineations are reflective of collaborations with members of the Yellowstone River Conservation District Council and members of the Technical Advisory Committee and the Resources Advisory Committee.

Working from the confluence with the Missouri River towards the west, the first geographic segment is defined as Missouri River to Powder River. This geographic segment includes some of the least populated regions of the entire United States. This segment is dominated by a broad, relatively slow-moving river that serves an expansive farming community whose interests blend with those folks living along the seventeen miles of the Yellowstone River that traverse North Dakota. Here the Yellowstone River is also important as a habitat for paddlefish and Pallid sturgeon. At the confluence with the Missouri River, the size of the channel, significant flow and substantial sediment carried by the Yellowstone River makes its importance obvious to even the most casual of observers. Prairie, Dawson and Richland Counties of Montana are included in this segment, as well as McKenzie County, North Dakota.

The second geographic segment, Powder River to Big Horn River, is delineated to include the inflows of the Big Horn and Tongue Rivers as major tributaries to the Yellowstone River and to include the characteristics of the warm-water fisheries. This segment is delineated to recognize the significant agricultural activities of the area and the historical significance of the high plains cowboy culture. This segment includes Treasure, Rosebud and Custer Counties.

The third geographic segment, Big Horn River to Laurel, essentially includes only Yellowstone County, but it is a complex area. To begin, important out-takes near Laurel divert water to irrigations projects further east. Additionally, it is the one county along the length of the river with a sizable urban population. Billings is known as a regional center for agriculture, business, healthcare and tourism. This area is notable for its loss of agricultural bottomlands to urban development. Irrigation projects are important east of Billings, especially in the communities of Shepherd, Huntley and Worden. These

communities and Laurel also serve as bedroom communities to Montana's largest city, Billings. It is in Yellowstone County that the river begins its transition to a warm-water fishery.

The fourth segment, Laurel to Springdale, ends at the northeastern edge of Park County, Montana. The river in this area is fast-moving and it supports coldwater fisheries. While there is little urban development in this segment, there are some rather obvious transformations occurring as agricultural lands near the river are being converted to home sites for retirees and vacationers. The geographic segment includes Sweet Grass, Stillwater, and Carbon Counties.

The last geographic segment is defined as Springdale to the boundary with Yellowstone National Park at Gardiner, Montana and is within the boundaries of Park County. The river leaves Yellowstone National Park and enters Montana at Gardiner. It flows in a northerly direction through Paradise Valley and is fast-moving. It supports a cold-water fishery that is well-known for its fly fishing potential. Near Livingston, Montana, the river turns easterly and broadens somewhat thus losing some of its energy. However, severe floods occurred in 1996 and 1997, and local groups have since spent many hours in public debates concerning river management.

Recruitment of Native Americans

Native Americans also have interests in the Yellowstone River. They are active in maintaining the cultural linkages between their histories and the local landscapes. For the purposes of this study a number of Native Americans from the Crow tribe and the Northern Cheyenne tribe were included. Native Americans were recruited by means of professional and personal contacts, either as referrals from state agency personnel, from Resource Advisory Committee members of the Yellowstone River Conservation District Council, or from other project participants.

Recruitment of Geographic Specific Interest Group Participants

The participants represent a volunteer sample of full-time residents of the towns and areas between the confluence of the Yellowstone and Missouri Rivers in North Dakota and the town of Gardiner, Montana at the north entrance to Yellowstone National Park. Participants were recruited from four major interest groups: agriculturalists, local civic leaders, recreationalists, and residentialists living near the river. A database of names, addresses and contact information was constructed for recruitment purposes. Nearly 800 entries were listed in the database, representing a relatively even contribution across the four major interest groups.

Individuals representing agriculture interests, including farmers and ranchers, were identified and recruited from referrals provided by the local Conservation Districts, the Yellowstone River Conservation District Council and the Montana Office of the Natural Resources Conservation Service.

Individuals holding civic leadership positions, including city mayors, city council members, county commissioners, flood plain managers, city/county planners, and public works managers, were identified and recruited through public records.

Individuals who use the Yellowstone River for recreational purposes, including hunters, fishers, boaters, floaters, campers, hikers, bird watchers, rock hunters, photographers, and others who use the river for relaxation and serenity, were identified and recruited from referrals provided by members of the Resource Advisory Committee. Participants were also identified and recruited by contacting various non-governmental organizations such as Ducks Unlimited, Trout Unlimited, the Audubon Society and by contacting local outfitting businesses.

The names of property owners holding 20 acres or less of land bordering the Yellowstone River, or within 500 feet of the bank, were obtained through a GIS search of public land ownership records. Twenty acres was used as a screening threshold to separate people who lived along the river corridor but whose incomes were from something other than agricultural practices (residentialists) from those who were predominantly farmers or ranchers (agriculturalists). The names were sorted by county and randomized.

Recruitment proceeded from the county lists. Other people living very near the river and whose primary incomes were not generated by agriculture were also recruited. These additional participants may not have had property that technically bordered the river and/or they may have owned more than 20 acres. In all cases, the recruits did not consider agricultural as their main source of income.

Participants were recruited by telephone and individual appointments were scheduled at times and meeting places convenient for them. Many interviews were conducted in the early morning hours and the late evening hours as a means of accommodating the participants' work schedules.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|--|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

A total of 313 people participated in the project, including 86 representatives from agriculture, 68 representatives in local civic roles, 76 representatives of recreational interests, 76 residentialists and seven Native Americans. A relatively equal representation was achieved in each geographic segment for each interest group.

Description of Interviews and Collection of Participant Comments

A master protocol was designed from questions provided by the US Army Corps of Engineers and approved by the Office of Management and Budget (OMB approval # 0710-0001; see example in the appendix to this volume). Questions were selected that would encourage participants to describe the local environs, their personal observations of changes in the river, their uses of the river and any concerns they may have had about the future of the river as a shared resource. Open-ended questions were used as a means of encouraging participants to speak conversationally.

The questions were adapted to the participants' interest groups. For instance, interviews with agriculturalists began with the question, "How many years have you been in operation here?" while local civic leaders were asked, "How many years have you lived in this community?" Similarly, agriculturalists were asked, "Are there any problems associated with having property this close to the river?" and local civic leaders were asked, "Are there any problems associated with having private or public properties close to the river?" The overriding objective of the approach was to engage the participants in conversations about the river, its importance and their specific concerns.

Participants were promised confidentiality, and open-ended questions were asked as a means of encouraging the residents to talk about the river, the local environs and their personal observations and concerns in their own words. All respondents were interested in talking about their perspectives, and they represented a variety of views of the river, including: farming, ranching, agricultural science, commercial development, recreation, civic infrastructure, environmental activism, historical views and entrepreneurial interests.

With only three exceptions, the interviews were audio-recorded and verbatim transcripts were produced as records of the interviews. In the other three cases, hand-written notes were taken and later typed into an electronic format. The total resulting interview data totaled approximately 2,700 pages of interview text.

Steps of Data Analysis

The content of the interview texts was distilled by way of analytical steps that would retain geographical and interest group integrity.

Segment-Specific Interest Group Analyses: Taking all audio-recordings, transcripts, and field notes as the complete data set, the research group first set out to determine the primary values and concerns for each geographic segment-specific interest group. The team began with the four interest groups from the segment Springdale to Laurel. Team

members read individual interview transcripts and determined a core set of values and concerns for the individuals represented. As a team, notes were compared and a combined outline of values and concerns was constructed for each interest group in the geographic segment. Quotes were then taken from each transcript in the set to illustrate the particular values and concerns.

Outlines of the interest group analyses for the Springdale to Laurel segment were then used as aids in constructing the interest group analyses in all other geographic segments. Care was taken to adapt the interest group analyses to highlight if, and when, the core values and concerns were different in each geographic segment. The Native American perspective was addressed as an individual analysis with attention to the specifics of those perspectives. Each of the 21 segment-specific interest group analyses was then illustrated with quotes from interviews.

21 Segment-Specific Interest Group Analyses

| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
|-------------------------------------|--|---|--|---|--|---------------------------|
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Segment-Specific Geographic Summaries: A summary of the values and concerns for each geographic segment was constructed using the sets of four geographic-specific interest group analyses. Geographic summaries were written to reflect the concerns that crossed all interests groups of the segment, either as points of agreement or disagreement, and were illustrated with quotes from the four relevant interest group analyses.

| 5 Segment-Specific Geographic Summaries | | | | | | |
|--|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
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| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

River-Length Interest Group Summaries: River-length interest group summaries were constructed for each of the four primary interest groups. For example, agricultural concerns from the five geographic segments were compared and quotes were taken from the segment-specific interest group reports to illustrate commonalities and differences. Similar reports were constructed for local civic leaders, recreationalists and residentialists.

| 4 River-Length Interest Group Summaries | | | | | | |
|--|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Organization of the Reports

Overall Summary of the Yellowstone River Cultural Inventory—2006: An overall summary of the inventory was written as a means of highlighting the values and concerns that cross interest groups and geographic segments. The segment-specific geographic summaries and the river-length interest group summaries were used as the bases for the overall summary. This report is by no means comprehensive. Rather, it is written to encourage further reading in the reports of each geographic segment and in the interest group reports.

Part I: Missouri River to Powder River: This volume includes the geographic summary for Missouri River to Powder River and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Part II: Powder River to Big Horn River: This volume includes the geographic summary for Powder River to Big Horn River and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Part III: Big Horn River to Laurel: This volume includes the geographic summary for Big Horn River to Laurel and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Part IV: Laurel to Springdale: This volume includes the geographic summary for Laurel to Springdale and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Part V: Springdale to Gardiner: This volume includes the geographic summary for Springdale to the boundary with Yellowstone National Park and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Research Team and Support Staff

The project was directed by Dr. Susan J. Gilbertz, Montana State University—Billings. She was aided in data collection and data analyses by Cristi Horton, Tarleton State University and Damon Hall, Texas A&M University. Support staff included: Amanda Skinner, Amber Gamsby, Beth Oswald, Nancy Heald, Beth Quiroz, Jolene Burdge, and John Weikel, all of Billings, Montana.

Laurel to Springdale: Geographic Segment Overview

Interviews in the geographic segment Laurel to Springdale were conducted May 22-26, 2006. A total of 54 interviews were conducted, including individuals with agricultural, civic, recreational, or residential interests as their primary concern.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|---|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
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| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Laurel to Springdale: Geographic Segment Summary

Two things come to mind right now. Although I believe in personal property rights...I believe, too, that...not everybody is going to get everything they want. It just has to be that way. (Stillwater County Local Civic Leader)

Introduction

In the study segment, Laurel to Springdale, three themes emerge as dominant across the four interest groups. One theme focuses on the changing riverbank profile as more and more residential homes are built on the river's edge. The second theme focuses on the river as a powerful and dynamic physical entity. The third is about the changing social profiles of their communities and how those changes influence user practices.

The Changing Riverbank Profile

Nearly without exception, the people of the Springdale and Laurel segment engage in discussions concerning changes they see happening along the riverbanks. Put simply, the riverbanks are becoming noticeably different as agricultural lands become sites for subdivisions or sites for exclusivity. Undoubtedly, the river's captivating beauty and physical forces are key reasons for residential development near the river's edge, but development is complicating conceptions of how to manage the power of the river.

Living near the river is an attractive idea, and those that do are quick to explain how much such locales add to the quality of their lives. Both residentialists and agriculturalists express the importance of living near the river:

The river to me is kind of mesmerizing, interesting. You never know what it is going to do. It is just nice to be watching it all the time. *(Stillwater County Agriculturalist)*

That Yellowstone River...is really...an exceptionally—well, I don't know quite how to put it, but it's really something....It's quite a deal. *(Stillwater County Agriculturalist)*

We border the Yellowstone. That is important to me,...that we live right along the river. It does affect your life....It is home. Just home, that's all. *(Sweet Grass County Agriculturalist)*

Paradise. It's just great, great living. Private and beautiful. We are so lucky and privileged to live here; it's just wonderful. We have about two and a half miles of riverfront, so we don't have any neighbors close, and it is just great....The river is

the reason we are here. It's the whole thing. There is constant action going on at the river, whether it's birds, or fishing, or deer, or whatever. There is always wildlife around which is our great love. We cultivate our land for wildlife. (*Sweet Grass County Residentialist*)

Everyday I walk down my hall, and I have a new picture window. And you know, it's just awesome. The colors in the fall are beautiful, [and] most of the time the sun's shining on the mountains. We can see Granite Peak, we can see all kinds of activity in the river with geese, and we just love it, it's just awesome....My heart just feels so good. This is our place. (*Stillwater County Residentialist*)

For many locals, the new residential developments expose and represent a shift in the economy of land values:

Land prices are going up all the time. It is tempting for people to sell....You can't buy the land and make it produce enough to make payments. That is changed in my lifetime. (*Sweet Grass County Agriculturalist*)

It's starting to look like home sites....There will be more houses all along, wherever they can buy small acreage....If [they] could get five or ten acres, if there's access to build a home, then I understand it's for sale, and they're going to subdivide it....The real estate man had called me up about it, says there's a guy from Atlanta, Georgia, who wants to build a house out there. (*Carbon County Agriculturalist*)

Everybody wants a little piece of land on the river, and then they build right on the river, which kind of sucks....You go up by Livingston, and you see the houses. I mean, house, after house, after house, after house, built right on the river. (*Sweet Grass County Recreationalist*)

It's people with lots of money coming in,...and [some are] pushing this planning so that the guy down the road that has a ranch [can] break a chunk off [for himself] so that he can stay on his place for the rest of his life, and give [what's left] to his kids. (*Sweet Grass County Recreationalist*)

You read about the romance of the Old West, and that's why a lot of these rich people come...for the romance. Well, there's romance in an old family farm, too. Their romance [the rich people's] won't buy you breakfast. (*Sweet Grass County Local Civic Leader*)

My daughter and son-in-law live on a ranch west of town here, and it's not a very big place....A realtor just appraised it at a million and a half....It's out of the question entirely for the kids to buy it. My wife and I have spent all of these years in agriculture, and just like most of the neighbors, whenever you do make a profit, you put it back into something else. So we got a million and a half dollars sitting up there, and nothing to show for it....How are the kids going to make a payment

and still be able to live there, too? And with an appraisal like that, the government won't let you give it away. You can't sell it for less than the appraisal...and [besides,] the last thing we want to do is sell the place. (*Sweet Grass County Local Civic Leader*)

Not only do residential owners shift land values, they often live in subdivisions that provide exclusive access rights and that shift the ways other locals can or cannot gain access to the river. The residentialists are openly thankful for the privileges provided by their subdivisions as these amenities add to the “paradise” quality of their experiences:

Well, our place right here, our subdivision owns about an acre and a half of common property right along the Yellowstone. So we have the opportunity to go down there anytime we want, and go down to the river....We have access to the river, and often we float from upriver to our common area and get out....It is just really nice having that access. (*Sweet Grass County Residentialist*)

This subdivision is unique in that there is a bridle path that follows the river for use by the owners in the subdivision. Anytime you have an easement like that, it is somewhat troublesome because there is no incorporated town out here. But if the towns grew enough, they could make a permanent easement, and everyone could use it. That is what bothers me....That bridle path was meant as a bridle path, and they shouldn't use it as access to the river. It may sound selfish, but I am paying taxes on it, and they don't. My liability covers only me, and if they got hurt, they could sue me. They wouldn't win, but they could still take me to court. That bothers me....A guy bought a bunch of the land, and is going to put in 100 houses [behind me, away from the river]. That is a huge impact. If those people think they are going to use the bridle path, I will have a problem with that. It was designed for this portion [of the subdivision], not the whole. So, the enforcement problem may be a real problem. (*Stillwater County Residentialist*)

Even in cases where the land is not subdivided into small parcels, new owners do not necessarily share access to the river's resources with locals. Rather, land is purchased as a block and held for limited private hunting and fishing:

They don't subdivide it, they just come in. They buy it up. They don't put any cows on it, they just let it sit there, and build a great big trophy house on it, and...the land isn't really being used for agriculture any more, it's either someone's personal hunting grounds or river access, you know. So, for me, you've kept people from living on it, so that those [wealthy] people can come in and block everybody off it. It doesn't happen all the time. (*Sweet Grass County Local Civic Leader*)

We have some [newcomers] that have moved in and their house is right next to the river, and then they want no one else to build next to the river. You know, 'I've got my little piece of heaven, but I don't want anyone else to be able to do that.' (*Sweet Grass County Local Civic Leader*)

You can see huge, orange-painted signs, meaning ‘Stay off. Private property.’ And the thing is that is coming about. It is not the local people that are doing this. It is the people from out-of-state who are buying these parcels. [They] want that little island as their own, even though they can’t access it, and they can’t use it for agriculture. They just don’t want anybody there. But, from an agriculture standpoint, when they show up to your house to go hunting, they expect you to allow them to do whatever they like. That is the problem with out-of-staters. They want it all for themselves and not let anybody use it. (*Carbon County Recreationalist*)

Deeper into the conversations are illustrations of the need to balance three dimensions of local life. First, locals are interested in the general economic prosperity of the community:

Development will always occur. [The community] is either going to...grow, or it will demise. You really can’t maintain the status quo. If you aren’t growing, you’re probably going to go down. You can’t maintain the status quo. (*Stillwater County Local Civic Leader*)

We are trying to figure where any new growth will happen. Most of it is happening west of town. We are looking at extension of power and annexation. The city is in the process of adopting a growth policy and looking at impact fees. Those are the fees charged to developers for the expansion of city services. (*Sweet Grass County Local Civic Leader*)

Second, locals express a great deal of concern for respecting private property rights:

Montanans don’t like to be told what to do. (*Stillwater County Agriculturalist*)

It’s your own property and you sell it to someone else. I guess they can do what they want with it. And most of the people that I know are good, but there can be some sour ones. (*Carbon County Agriculturalist*)

If I want to add a little addition on, I should be able to do it. But you can’t just add on. You got to go pay for a permit. And that’s the same thing with the ranch. You just can’t, not that we were going to do anything, but we had a battle to get permission to build. Because I wanted to put the barn right back in basically the same spot that the barn was. And we fought, and they said, ‘You can’t have it where it was, it will wash out.’ Well, I’m going to put it in cement in the ground. That old barn sat on a wooden foundation and it never floated away in the big flood. If I put this one in cemented foundation, that’s going to float away? I mean, it’s just stupidity. (*Sweet Grass County Agriculturalist*)

Third, they are concerned that development should occur in a responsible manner and that attention should be paid to the potential impacts of development on the river:

It's very special to have this river here, and, of course, we want to protect it. We want to make sure that any housing developments follow the DEQ rules, [especially] septs should be placed according to DEQ. I guess I don't believe in setbacks. I think the property owners have the right to be as close to the river as they want, without damaging the river. If they do not damage the river, I think it's their property line. (*Stillwater County Local Civic Leader*)

To the extent that we have state statutes that specify, we do have minimum standards for the flood plain by state law. One of those is public health and safety; you can't permit something if it is a public health and safety threat. (*Sweet Grass County Local Civic Leader*)

Flood plains are sacred. We just cannot break in flood plains like we used to. There are some things...[that the law requires: that you have to have a three-foot differential, the land where you're going to build your house has to be at least three feet above where the water table is. Well, if that's based on a dry year, and you build your house and then you have average years again, or normal years, you might have a problem. The law doesn't account for that. (*Stillwater County Local Civic Leader*)

Oppositions to developing stricter regulations are not categorically accepted or rejected. Locals approach such ideas with trepidation but also with a willingness to consider how the community might dampen development at the river's edge:

I think that sort of thing is critical: to leave a fringe on the river undeveloped, to keep the water as pure as possible, to try to work on the tributaries, be sure the ranchers have adequate water, but don't have any more than they need at the times they need it. I think they're working on all that. But I think it'd be great to get people to sign a voluntary thing that we won't build within 200 feet of the river. (*Sweet Grass County Agriculturalist*)

Septic systems [are a concern]....They're too close together, and [too close to] their wells, and it's just a mess. And [there's] nothing you can do about it. Some were put in as, 'Oh, we're going to be using it for summer homes, so we'll just have storage. We'll just have a holding tank.' Well, it turned into year-round living, and a hole got poked in the tank, you know. So, probably, it's flowing out the bottom into Rock Creek...and there is not much we can do with them. Just don't want any more of them. We're trying to...put their feet to the fire, and say, 'Now, you've got a holding tank. We want records, public records.' So, we're working on that area. We don't allow any holding tanks any more. (*Carbon County Local Civic Leader*)

I'm not saying we're ready for [zoning]....Over time,...that may not be a bad idea....I think folks are more and more receptive. A lot of the people are coming in....It's a nice place to live, so they're coming from everywhere. You know, Californians,... Texans,...and they're drawn here because it's not like where they're coming from, yet they want to make it like where they're coming from....But they also have good ideas. They come from areas where they have more progressive local governments...and are wondering why [not here]?
(*Stillwater County Local Civic Leader*)

Roads are probably the biggest thing. They take a relatively big part of the budget. Roads are something that everybody uses, and we have a lot of problems with them. We can't afford to do all of the graveling we need,...[and we can't afford] to replace all the bridges that should be replaced. (*Stillwater County Local Civic Leader*)

It's changing rapidly....I was talking today to a man selling his ranch who has two offers on it right now. And I think that a lot of people don't realize how quickly it's changing....I think Montana needs to decide, do they want tourists?...Montanans need to sit down and decide the future of Montana, plan it. What do they want it to be? Want it to be this? How do you keep it this way, or make it this way?...It's going the other way....[Montanan's have] got to be the author of the future. They've got the opportunity, now, because it hasn't been ruined like many places in America....Seize this opportunity, and do it together, work in a cooperative way, and work out the future. Well, that's a lot to say,...[and] hard to do. (*Sweet Grass County Agriculturalist*)

The changing riverbank profile generates a great deal of discussion among the people in the Laurel to Springdale segment of the study. There is an apparent desire to manage the development along the river's edge so that the historic agricultural sense of these communities is not wholly lost to a residential dominance. At issue are private rights, community prosperity, and deep concerns about developing rules for protecting the river. As the individual communities grow, there is recognition that a community consensus is unlikely but that rules are necessary.

The Yellowstone River is Dynamic and Powerful

While the Yellowstone River is an especially attractive site for residential development, many people are more impressed by its power. The river is known for its ability to flood and erode its banks. The floods of the mid-1990s are important illustrations for understanding the power of the river. Such events are reminders that the river is powerful, but they also serve as the impulse for wanting to control the river.

Local understandings of flood plains are complicated. Many people understand major floods are difficult to predict, challenging to control, and that they result in change:

It is meander-land, and nobody can own that....There were river changes in that '98 flood, and, of course, some islands were created, and it washed down banks....Some people lost acres and acres of land....I know of one group who ended up with an island, and they claim it's theirs, because the river ran right through their property and created an island....Nobody pays taxes on it....For example, if this is a lake, and the water comes up in high water years to cover most of [the land], you wouldn't think that would reduce your taxes, [and] it doesn't. Or, if it goes down, and you can farm this for a while, you still don't pay taxes on it. But, you can't claim it either;...its no-man's land....[It] used to be that the Corps of Engineers could come in and just change things at will, and that caused its own set of problems, here and there. I don't like the idea of changing the direction of the river....It has its own set of problems that come with it. It might help this guy who lost some acreage to reroute the water away, but it ultimately, someplace else, will cause a problem....I think rivers should meander wherever they naturally go. (*Sweet Grass County Local Civic Leader*)

[After] I took office, in the southern part of the county, there were some ice build-ups and there were primarily summer homes, and they were concerned about flooding, so they called me, the new commissioner in their district, and said we've got this ice, come and help us out. It sounds like a reasonable request to me, [but] I'll have to ask and get back to you. I talked to our road and the other commissioners and, no, we can't do that. Really? Why? Well, three things. First, it's on private land and there's liability....Another one is the Fish and Game is responsible for the fish habitats [and] would have some problem if we took heavy equipment and messed around with the river. And the other thing [is]...an insurance company would look at this ice jam as a natural event, call it an act of God or something. So if we go in there with our equipment and undo that, we're just pushing the problem downstream and then it's our fault; it isn't an act of God, it's an act of the County Commissioners. So, we just would like to help people, but we can't, and when we explain why, they accept that. (*Stillwater County Local Civic Leader*)

I think in certain spots you can prepare a little bit for [floods], but nobody knows what's going to come and how big it's going to get. When it hits 37, or 38, or 40,000 [cubic feet per second], there's only so much you can do. At that point, you're not stopping it. You might try to do something to fix it or stop it from the next time, but it will do what it wants to. (*Sweet Grass County Recreationalist*)

Residentialists speak in a variety of terms concerning the possibility of flooding and erosion. While most will admit to certain eventualities, some hold that events capable of causing major destruction are unlikely within their own lifetimes. Those holding that view are referred to here as NIMLYs, individuals who understand that flooding can happen, but they generally hope, or assume, "Not In My Lifetime/Years."

Others are convinced that their particular locations are quite safe as compared to nearby locations, and many residential owners are frustrated by flood plain maps:

As far as flooding and such? No, we don't [worry]. The town's going to flood before we would. We're higher than that, so we don't have a problem with that. I think if we're going to flood, I'd better call Noah in because, you know, it's going to get pretty high. (*Stillwater County Residentialist*)

I don't know if during our time down here we will [see change]....But there again, it depends on the number of floods. That is going to have the biggest impact on it every time. If that happens there is something different every time....But I don't think we will see a major change. I don't expect a new channel to be going across the hills or something. If it does that, we will be out of here! We will be building a big boat with a lot of animals on it. And one thing down here where the river runs, there is that big hillside there, so if it is going to change, it isn't going to impact this way....It was a big flood we had in 1996, 1997, and we weren't living here prior to that, but we floated it a lot, and it didn't make huge changes. That was a good-sized flood. (*Sweet Grass County Residentialist*)

The last time they did a survey for the flood plain was probably over 20 years ago, and it is something that needs to be done and upgraded....If you look at the flood plain maps they have got, they show us in the flood plain, and that is wrong. We are not in the flood plain. We are too high for a flood plain, but that is the federal government. What are you going to do about it? As far as people building low, I don't think they should be allowed to build in the flood plain. All it does is cause problems for everybody concerned. And for people not in the flood plain, we are being penalized....If there are not enough regulations, or if they have not been reviewed, when the river changes over the years [the maps are not accurate]....Anybody along this side of the river is required, if you refinance, to have flood insurance, and you can't fight it. If you pay cash, you don't have to have it, but if you finance, [it is required]....I mean, there need to be regulations, and people need the proper insurance, but it needs to be looked at closer and more often. (*Stillwater County Residentialist*)

Based on years of experience, agriculturalists have a great deal of respect for the power of the river. Others, too, are fully cognizant of its power:

It's a big river. And at flood stage, it's really big. Like I said before, August to September, it gets really low...[but] I always liked that there was a source of water for the livestock. It never went dry. I don't think it ever has. (*Carbon County Agriculturalist*)

That river is a powerful force. It is a powerful, powerful thing. I don't care what man does, if [the river] decides it is going to go, it is going to go. (*Sweet Grass County Agriculturalist*)

I never know where my property line is at....The river takes a little every year. In real high water years, it's more aggressive. It takes fertile soil real fast....I'm not whining, I'm resigned....I've resigned myself to this in sadness. (*Stillwater County Agriculturalist*)

The river is going to do what it is going to do, and you have to live with it the best you can. (*Sweet Grass County Agriculturalist*)

Between our place and Laurel, the land spreads out and they can farm on that side of the river...and I know they've had trouble. They get flooded out. They're in the flood plain, and it gets real bad sometimes. It's a lot of trouble for them. (*Carbon County Agriculturalist*)

In some places [erosion] is tremendous. It depends on the topography and it depends on the river....In some places erosion is a problem; in other places, because of the rocky bottom ground, not so much....Can I say it is a huge problem in the county? No, but it is a problem in certain, specific areas. (*Sweet Grass County Local Civic Leader*)

One thing about the river right now, it is fast, and it is dangerous. People get on it, and they don't know what they are doing. [There are a] bunch of undercurrents. It will take a boat quick. (*Carbon County Recreationalist*)

We saw damage down here with ice. The ice just all of the sudden broke, and spread and knocked down trees....We had an ice jam, and it backed the river up, and it floated ice out all over this area. There were ice chunks, clear over to the bank, the size of Volkswagens. It happened while we were sleeping, and we didn't hear it, but we got up the next morning and were like, 'Holy crap.' (*Sweet Grass County Residentialist*)

The river took that island out in about a week and a half. It had 50 to 60 feet cottonwoods. It was just covered in trees. It just took it right out, you know. That is what the river does. We just expect it is going to happen. (*Stillwater County Residentialist*)

In terms of managing that power, a number of priorities emerge. For participants in the Civic category, the priorities center on roads, bridges, public safety and a desire for better flood plain maps:

Public safety has to be number one. Number two is probably...protection of property rights....I would put a high premium on property rights. (*Sweet Grass County Local Civic Leader*)

One of our obligations is to keep the roads and bridges open, and that would be for emergency services primarily but also, for...school buses. (*Stillwater County Local Civic Leader*)

The good old Yellowstone is a cantankerous old thing. That river is wonderful, but it's also wonderful to watch it. It's going to go wherever it wants to go. I'm kind of torn...because we have people [who] defy us to do any rip-rapping, or to save a public structure, or anything like that. We're not supposed to do that, I guess. That's what I'm hearing. But, darn it, you've got a two million dollar bridge sitting there, and the thing's washing out, you better do something. We can't shut all the traffic off....This bridge down here was in jeopardy. So, they brought in a lot of rock and fixed it. It's fine. We had it protected....We've, [also] had some subdividers that have gone on their own and put in some Mickey Mouse things, jetties. But it really didn't upset the river a whole lot; it's got a mind of its own. (*Stillwater County Local Civic Leader*)

I would like to see a lot better mapping on the Yellowstone River. Most of our maps are 1982 FEMA maps. Some of the Yellowstone has had some updating, and...that is helpful, but there needs to be some better mapping and better understanding of activities in the flood plain, and how to best undertake those, both from a safety issue and also trying to protect the resource. (*Sweet Grass County Local Civic Leader*)

For agriculturalists, the priority is the desire to protect productive land, which is tempered by a sense of futility:

Watching will convince you that nature will take its course....It has worked its way into my meadows...and I've lost productive ground. (*Stillwater County Agriculturalist*)

In some ways, the river is a pain in the neck. You go down there and it [has] taken off five acres. Every year...it just keeps taking more and more. And so, that's why I'd say it's a pain in the neck. Nothing you can do about it. Just watch it go. (*Sweet Grass County Agriculturalist*)

Well, it was about '96 or '97 when it flooded....All of this was under water because it was up about 30 feet. We couldn't get into our buildings or anything over here; it was all under water. We had about four feet of water....It damaged the trees in the meadow. It took three years to get it back in shape....We have probably lost 30 acres in that flood, and it is still taking ground. (*Sweet Grass County Agriculturalist*)

We see ice jams come instantly, like we had thrown a dam right across the river. The same year we saw the 500-year flood, 1998, that winter, we had two ice jams right behind our buildings and in three to five minutes, there were probably 50 acres with two feet of water and icebergs along. One wasn't too bad. The other one really did the job on us—tore out a lot of pens and stuff. I mean, the river is kind of amazing. And, when it forms ice in just 24 hours, ice will start stacking up and look like the Yukon River. (*Stillwater County Agriculturalist*)

Most people recognize that erosion is a natural process and difficult to control. Recreationalists often argue that attempts to control erosion are themselves problematic, but others will also argue that attempting to control the river may not be wise or economically feasible:

That guy spent tens of thousands of dollars rip-rapping it, to protect it. Since the flood, he has done more rip-rapping. (*Sweet Grass County Residentialist*)

When we're talking about the Yellowstone, we're not talking your normal Montana river. I mean...there's a lot of power in this bad boy....It will do what it wants. So...to keep it from eating stuff up, you've got to get pretty tough with it. (*Sweet Grass County Residentialist*)

I'm not sold on whether we should try to engineer the river with rip-rap....I think that's very unnatural. And, yes, [the river] will eat your property. It was eating into our land....but we never rip-rapped it. It's a natural thing. And I guess that's another thing: you got to let these streams be natural. I think you got to let them have their natural habitat, if you will. It's like an animal; a stream has a habitat, doesn't it? (*Sweet Grass County Agriculturalist*)

I don't see that the erosion itself is a huge problem, unless you are a farmer that is losing ground, which is big. I don't think there is much fighting [erosion]. I think rip-rap is a mistake. I think rip-rap is almost an arrogant way that man tries to control a force much bigger than himself. (*Sweet Grass County Recreationalist*)

In '97 to '98, [flooding] changed the Yellowstone River in a lot of places....Pools I used to fish in are not there. The islands I used to mushroom, are not there....[One] man wanted to armor it, and they wouldn't let him, and then when this big flood hit...I don't know how many acres it devoured at that one man's place. (*Carbon County Recreationalist*)

The issues involved in attempting to control the river are complex. One set of complexities is introduced when discussing rip-rap as a remedy. This method is considered effective, but at odds with the notion of a free-flowing river:

Certainly, I understand the people that have property, and they want to try to preserve their property, and I respect that. But the fact is, the Yellowstone is a wild river, and,...to me, it sort of comes with the territory....[We should] try to achieve [a] balance, and not be overly regulatory with citizens [as far as]...what they can and can't do with their property, but, on the other hand, realize that, hey, you're not just doing something that's going to perhaps impact a little piece of property; you're doing something that could have potential impact on a resource that has significant economic impact, [and] social impact...on a whole bunch of people. So, people need to understand [it is] a lot broader than their little piece of property on the river. (*Stillwater County Recreationalist*)

The Yellowstone is, just....It's really cool that it doesn't have a big dam somewhere....It's free....You can see where it starts, and where it ends, and there's nothing stopping it. (*Sweet Grass County Recreationalist*)

Free-flowing at whose cost? The people who want the river to run where it wants to run don't pay for it....I should be getting an award from the free-flowing folks because I've contributed a half-million in the form of lost land. (*Stillwater County Agriculturalist*)

It's the longest free-flowing river in North America, and there's nothing else like it....It's a natural fishery...and it's scenic and it's just an amazing place. The length, the variety, and the types of fishing are unsurpassed anywhere. (*Sweet Grass County Recreationalist*)

You know, there is a lot of agriculture that is being affected by what the river is doing....if it takes its course, it moves all over the place...It is going to do what it well pleases, but maybe we can stabilize it....We put a lot of rip-rap in since [the flood] I have been here. Probably close to 500 to 1000 feet worth of rip-rap and we have applied for more. (*Sweet Grass County Agriculturalist*)

The rip-rap and the ironclad are the most effective if it is done right....I am more for the agriculture and saving your property. (*Sweet Grass County Agriculturalist*)

The man who owned it before me....spent a great deal of money on it....But, you see, [my losses] all could have been avoided because right at the Yellowstone River Bridge, after the water would go down each year, there was debris and a few rocks, and we would go in with a back hoe and put it back where it was....Then the government made a practice where you couldn't remove that again, so the river swung, and just ate it out.... We should go back to the Army Corps of Engineers, and I should be reimbursed for that rock jetty, because, when I bought the property, that is supposed to be taken care of. And it's very expensive....Everything is so expensive....I don't plan to do anything. I don't have a great deal of faith in the Corps of Engineers. I think they should come out and justify what they did. (*Stillwater County Agriculturalist*)

We certainly have. There is a lot [of erosion] right down on the corner of the subdivision....I suppose [our neighbor] has lost about a quarter of the lot. The river makes a turn in there and just digs. A lot of that bank is leaving, and below there, too, because the owner had to have them rip-rap it along there....And certainly with the flood we have notice....And, that was major. That was major. (*Sweet Grass County Residentialist*)

Yellowstone River is the longest, free-flowing river in the United States, undammed. That is pretty neat, and to do too much to it, [such as rip-rapping], would be sad, too. To do too much, would take away from it....I don't know, just a thought there. (*Sweet Grass County Residentialist*)

Additionally, many people understand that rip-rap potentially propagates erosion problems downstream:

When the river is flooding and eroding land it is trying to relieve itself. If you tighten up down here, someone downstream is going to get it. It is almost impossible to get permission to rip-rap. (*Sweet Grass County Residentialist*)

[Rip-rap] can definitely have an effect downstream. It re-energizes the river. You definitely have to take a look at that....I'd be very concerned if I was a landowner downstream and somebody put in some rip-rap. They should definitely have a say, too, and there should be some remediation, if [those downstream] lose land as a result of rip-rap upstream. (*Sweet Grass County Recreationalist*)

You can see it takes some planning. If you rip-rap one side of the river it, it'll start eroding, and it makes channels, and it'll bleed off this side over here. (*Sweet Grass County Agriculturalist*)

Sometimes there is an embankment of some sort, whether it is rip-rap, or those barbs that go out into the river with the rock....Maybe the best thing would be to recognize that it is going to happen, and [that]....you can't fix every problem. Putting in some fake retaining wall or rip-rap may exacerbate it instead of fixing it. I am not advocating a specific solution. (*Sweet Grass County Local Civic Leader*)

The north side has a railroad track that has an affect on the hydraulics....Also, things done upstream have made a difference....[The river] works the course of least resistance. (*Stillwater County Agriculturalist*)

You can't go in and interfere with the river anymore. I agree that if you're going to go in and flood someone else, or hurt something—fix mine and flood you—that's not good....[But] when the road washed out a few years ago, they could have stopped that. (*Carbon County Agriculturalist*)

The river is the river, and you are not going to control it. If you are doing something here, it is going to affect something, or someone, down there. High school geology taught me that. (*Sweet Grass County Residentialist*)

Nonetheless, there is a sense that some projects are worth doing:

Projects should be based on merit....[But] the scale that would be effective will never be approved....The 'controlled stream' won't happen....The massive concept won't happen. (*Stillwater County Agriculturalist*)

This bridge here just south of Columbus, it used to have a lot of rip-rap on it. And, four or five years ago, when we had the high water, it took that rip-rap away. And it was big rip-rap. And now, I'd say it's underneath that bridge someplace....That whole bank—it's just a small piece of private property—but that's going to just

keep eroding away to the road. And that's a pretty important road....I think they have to have an aggressive rip-rap program. We've got infrastructure that needs to be protected....Let us get in there to protect [it]....[Let us] put some large rocks, rip-rap, in there to protect those things. Most ranchers cannot afford to rip-rap...and the river just eats away and takes away, but roads need to be protected. (*Stillwater County Local Civic Leader*)

Another issue involves questions regarding rip-rap and the health of the fisheries. Even among recreationalists there is no agreement regarding whether rip-rap does, or does not, impact the fisheries:

It's a real fine balance, in my opinion. I have the utmost respect for other interests....I know we have to work together. So I think that's why it's important that we do strike a balance in terms of some of the things people are looking at. For example, putting the rip-rap on the banks...may prevent erosion of their property and their interests, but, if its not done properly, it could have some sort of adverse impact on the fishery, which concerns me. And then it takes away from that pristine environment....I like the fact that,...in this section [of the river, in] very few places do you see any man-made changes to the river. It meanders, it's pretty natural, and, as you can see [today], it's really roaring....When it starts to lower itself down, some new side channels will [form], there'll be new obstructions,...new fish habitat, and so on. (*Stillwater County Recreationalist*)

It's such a meandering, naturally flowing river; it seeks all these little braids and channels and so on....I'm not sure, but my suspicion is that when you start to mess around with it too much, then it's going to perhaps eliminate or degrade some of that natural structure and...habitat. (*Stillwater County Recreationalist*)

I always figured rip-rap made habitat for the fish....They say it's [only for] the big fish, but you can have two people with the same study, one for one group and one for the other, and you will never have the same answer. (*Carbon County Recreationalist*)

They say rip-rap is bad for the fish and all that crap, and [then] you watch the guides take people where the rip-rap is. The fish love it in there. It is habitat for them. They can get under the rocks and hide. I don't understand [the objection]. (*Sweet Grass County Residentialist*)

Many land owners talk about the expenses involved in trying to stabilize a bank as “quite an investment”:

I have no education on how to tame a river, how to keep a river in its boundaries. I think it can be done but it would take quite an investment...The last I heard, rip-rap was \$125 a foot. It doesn't take long to eat up a life savings. There is no guarantee. It has got to be something on a larger scale than an individual can do. The government will have to do it or nothing can be done. The county can just

hold a little here and there....I am sure there is engineering out there that can fix it, but just putting a little bit here and there isn't going to do it. (*Sweet Grass County Agriculturalist*)

Had I substantial resources, there might have been things that could have been done....[But,] the scale is overwhelming....To restructure an old jetty and rip-rap was three to five times the cost of the land....I didn't have enough money because I had just bought the land. (*Stillwater County Agriculturalist*)

We have the permit and everything, but we didn't have the money to. [It] costs too much. (*Sweet Grass County Agriculturalist*)

I remember reading in the paper, after the 500-year flood in Livingston, there was a guy that went ahead and saved some ground. I can't remember how many miles it was, but it costs him \$600,000. That's what he put into it....He must have had a lot of money to invest, because it would take a long time to ever get it back. If it was for agriculture, I don't know if you ever would [regain that money]. (*Stillwater County Agriculturalist*)

Rip-rapping is the cheapest form of erosion control....Some people will use steel plates, and pound in bridge pilings, and make a wall if they are trying to protect a house. Concrete walls are very expensive. (*Sweet Grass County Residentialist*)

That guy spent tens of thousands of dollars rip-rapping it to protect it. Since the flood, he has done more rip-rapping. (*Sweet Grass County Residentialist*)

Also, the permitting process with regard to rip-rap generates lively discussions:

It's got to be a commission that balances everybody. I don't think it should be totally up to the Army Corps of Engineers, or anybody else that permits it. I think you really have to show a need and [show] why this river needs to be armored at this point. There's some very good reasons,...but [no one should] have *carte blanche* to go ahead and place rocks. (*Sweet Grass County Recreationalist*)

We've got a bunch of rip-rap that we got put in before all of the environmental regulations....I don't know...if we can even rip-rap now or not. It's a touchy situation....A lot of these...environmentalist seem to have a problem with it....They said it can create sediment problems....I think it all boils down to they think that if the stream wants to move, it should be able to,...even [if] some guy's paying the taxes on the land....If the river wants to take it all out, they don't care. I think that's the way they look at it. (*Sweet Grass County Residentialist*)

We did a little rip-rap on Bridger Creek last fall, and there were six or seven agencies involved in that permitting process. The county was involved in it. We were working for the county. They were trying to protect county roads. It took months. (*Sweet Grass County Residentialist*)

I think it's a good thing that it's hard to get the permits, but I think they just have to start addressing some different ideas on how to control the river during high water and how to keep a lot of the water in Montana instead of letting it go on down to the Mississippi to support barge traffic. (*Stillwater County Agriculturalist*)

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I've worried a time or two about some of these regulations that the government has on it to where you can't get some very simple things done in a timely fashion. By the time you wrestle with them, why, the condition has changed, or gotten worse, or whatever. That would be one of the complaints:...by the time you deal with all these government agencies, you can get a little bit goofy, you know. And then you get disgusted, and then you get discouraged, and then you quit,...[and] just say, 'The hell with it, they're going to do what they want to do anyway'....But there's got to be communication. There's absolutely got to be communication. And you['ve] got to have it from the engineer, and the hydrologist, and the old farmer/rancher, and grandma and grandpa, and everybody. And you got to talk about it, and discuss it, and see what you can come up with. That's just that simple. (*Stillwater County Agriculturalist*)

Oh, the regulations....The hoops you have to jump through to get a permit to do anything....I wish [the Corps of Engineers] were more accessible....We have a perfect example....We're having a problem on Bridger Creek with some people not complying with...stream regulations, and took them a long time to pay attention. But now they are coming. It just seems like it takes a lot to get them. (*Sweet Grass County Local Civic Leader*)

The use of weirs as an alternative to rip-rap was discussed only by a couple of people. They argue that weirs work well, but that they may not work in every situation:

Bendway weirs. They go into the upstream about a 45-degree angle maybe. You dig them in, and you run them back into the bank....When the high water comes, it flows over the top actually, and it pushes that stream [away from the bank]....[The weir] doesn't cause that scouring effect on the edge. Where, if you put rip-rap out on the edge of the bank, it tends to scour and get deeper and deeper next to the bank,...[the weirs are] much better than armoring. We've had experience with it—made a believer out of me. And these are high,...pretty fast-moving waters. Yeah, it's been used a lot over the years. I think a lot of people weren't really thinking they would work, but they do. They actually do work. If they're put in correctly, and you have a big enough rock, and they're dug in so they're in deep, and the angle is correct on them, [then] they sure do work....[And

they are] cheaper than armoring....You only have to have them every 150 or 300 feet, whatever it might be. So you just build them and we put in three or four....The first year, high water actually ran over them, but they survived. It worked good; it worked just the way it's supposed to. You know, everything doesn't work the same everywhere, but a combination maybe—I was sure impressed with them. (*Carbon County Local Civic Leader*)

Changing Social Profiles and User Practices

A third major discussion among locals is the apparent shift in community values concerning recreational access to the river via private property. Most residents of the area remember when the “old school rules” were abided by among property owners and recreationalists, meaning that recreationalists asked for permission to gain access, the landowner would grant permission, and in return the recreationalist would be respectful of the landowner.

Some Agriculturalists still operate according to the “old school”:

All the time I have had it...everyone was welcome to come down and fish, the same way with deer hunting....I've always shared it. [It] never cost me anything to let them go down and fish....It was fine with me. (*Carbon County Agriculturalist*)

There are a lot of local people that use it. It isn't uncommon to see boats along here....We have had people ask to fish here that come from Billings or whatever....I figure if they are good enough to ask, they are good enough to use the river. We haven't had any problems. (*Sweet Grass County Agriculturalist*)

We're pretty liberal with letting people go down on our individual place. But then, the neighbors don't, so, consequently, you get the rush. You know, you get the people....You hate to see it, somebody with a couple little kids, driving clear to Livingston to wet a line. (*Stillwater County Agriculturalist*)

Many recreationalists also discuss the informal “rules” of sharing the river. They, too, notice that not all users are respectful of others or of the resources:

People are usually pretty congenial at the take out. I don't know...you just have to have some etiquette. You have to come from parents that taught you to give a shit. (*Sweet Grass County Recreationalist*)

All in all, the garbage, the campgrounds, everything is pretty neat and tidy....When I was a kid, I saw tires burning along the shore, beer cans. Oh, yeah, it is a lot more clean than it was 30 years ago. (*Carbon County Recreationalist*)

I have given this overcrowding thing a lot of thought. Generally, on weekends, I don't do guiding. If I have to, I get out early, and get in early. Everyone goes out

on the weekend to get away, and they take their dogs. When I first came here, the Yellowstone wasn't really used. Now there are people camping out. People need to take care of their waste. That is another issue. The one thing is, they have put potties in at access [sites], but how do you deal with it on an island? I don't know. There will be a lot more people camping out on that river. That is what I see in ten years. (*Sweet Grass County Recreationalist*)

However, property owners have dealt with abuses; and in response, some have posted their property as private, with the intention of not allowing public access:

[There's] the world-famous hand gesture....[And,] I've had trouble with vandalism. You know, people pouring water in my fuel tank...and being cursed at for taking water out of the river and killing the fish. (*Stillwater County Agriculturalist*)

We had no problem when I was younger. People didn't do that; they respected you. If they wanted to go fish, they came in and asked. You know, they respected people that they don't anymore....That's right; they would even come in to our place and ask if they could put their boat in. I mean, it was all done decently, and it isn't anymore....I mean, we had no problem with it. As long as they come in and ask permission and, you know, did things right. (*Sweet Grass County Agriculturalist*)

Fishers leave everything from defecation to beer cans....Public access does not come with respect....I defy you to keep the fence up that is posted with private-property signs. (*Stillwater County Agriculturalist*)

With the fishing access law, people cannot get to my property if they stay within the boundaries where they're supposed to, but...I catch them coming up, and that really makes me angry. If I decided to go into Billings and camp in someone's yard, you know what would happen? It's the same thing, and it is worse....They put their sanitary napkins on the bank. It's horrible, [dealing with] their garbage. (*Carbon County Agriculturalist*)

Some recreationalists are beginning to think in terms of controls:

It would be really nice if people would regulate themselves, but they just don't do that....I'm really not big on government getting hugely involved in things....Well, I definitely go for regulation, but there'd have to be some forethought. (*Sweet Grass County Recreationalist*)

We don't have to be so greedy. Put some self-limits. We have to start thinking as stewards, not as businessmen. (*Stillwater County Recreationalist*)

All I know [is] I want [to] get these stupid, big boats off the water....The way it used to be, the people you would see on the river were fishermen, not just people

running up and down the river. Now we have the jet skis on there, which I am seeing more and more up in my little turf....Twenty-five years ago...you never heard the sound of the jet boat, and, now, everybody seems to have a jet boat....Certain times of the year, there should be restrictions...[especially in] places where the [water] is real, real low. (*Carbon County Recreationalist*)

Locals position the shifting social dynamics in terms of legalities, while at the same time they lament the changes. Tension is apparent in these communities as they continue to advocate private property rights while they deal with community members that no longer know, respect, nor choose to engage with one another.

As far as out-of-towners locking their places up and not allowing any access, do I like that? No, but I think it is their legal right to do it. (*Sweet Grass County Local Civic Leader*)

At the same time, sympathies across interest groups are easily found:

It's landowners, and sportsmen, and everybody. Basically,...everybody has to work together to make a decision. Most of the time, it's the Army Corps of Engineers that makes the decision....They have a big hand in it...[There] should be more [people involved] than them,...[and] it should be more than the landowner, in a lot of cases, too. That's a tough one, too, even in Montana. Look at some of the old ranchers, 'It's my land, and I'll do what the hell I want with it.' And they're right in a way. It is a tough one. The use and everything has grown so much on the Yellowstone. Montana has gone from agricultural to basically tourism, and the Yellowstone is a huge part of that....But you don't want agriculture to go away, because that's what made Montana attractive in the first place....[We've] got to keep some of the wide-open spaces. (*Sweet Grass County Recreationalist*)

I think that preserving the agricultural aspect of the community is really important and a lot of it can be done through education. I don't think it is a win-lose situation....I think, for the most part, ranchers are pretty responsible. I think that they can do things better, but that is more of an educational process than intent to harm the resource. (*Sweet Grass County Local Civic Leader*)

I think even the people that live in Billings, and Yellowstone County to the east consider us their playground, which is fine. If I lived over there, I'd want to come over here, too. (*Stillwater County Local Civic Leader*)

A little guy down on the river said, 'I have seen the elephant and heard the owl.'...He had been to town, he had seen the city, and he liked the rural part. (*Stillwater County Local Civic Leader*)

They want to do what's right. They want proper sewer and water system and they don't want to affect their neighbor's either. So they want to make it work; in most

cases some people don't, but most people do. Most people want to protect the environment. (*Stillwater County Local Civic Leader*)

Is the tax structure the way it should be? Or should the tourists pay more and give Montanans better...schools, roads, etc.? I think taxes are too low. And, under that argument, they should raise the taxes, and tax these new owners. Now, I hate to say this, but I know of municipalities that tax the non-resident owners more than the resident owners. Now I don't know whether that's legal, but they do. (*Sweet Grass County Agriculturalist*)

I think the State of Montana is changing a lot, because there are a lot of people coming in concerned about the river, concerned about the environment....And, I would have to say that you get some out-of-towners, like the people up and downstream from us that frankly have done a great job taking care of things, because they have enough money that they don't have to worry what the hay is selling for and what the cattle is selling for. (*Sweet Grass County Agriculturalist*)

I do think there's another side to it....[Outsiders] bring a lot of money into the community. And, like it or not, they cause property values to increase, meaning that if anybody wants to sell their property, they're going to get a good price for it. And, in many respects, [the new buyers] don't abuse the land. (*Sweet Grass County Agriculturalist*)

In the face of changing contexts, participants from all interests groups maintain a desire to see the issues addressed locally. Attention is paid to the notion that one answer will not fit every situation. Yet, it is apparent that guidelines for making local decisions would be appreciated. Three quotes from Sweet Grass County illustrate that persons in virtually all groups understand that local control will work best if it is guided by helpful information:

I am an advocate of local control. I think it should be a local thing....They know that community best. They understand the needs of the community and the different constraints. It should be a ground up focus. I don't think you can say it is 100 percent local. If you are dealing with a river like the Yellowstone, you are dealing with something that affects other states and areas....Local control should be primary, but not the only consideration. (*Sweet Grass County Local Civic Leader*)

It's a totally different river and environment five miles upstream of Livingston than it is five miles below Big Timber. It almost has to be a special case. I don't think you can adopt a policy for the whole river. It's a different fishery downstream. Below Forsyth and all that, it's an unbelievable warm water fishery...that probably isn't being utilized. Decisions being made down there shouldn't necessarily be the same decisions made up here. It has to be a case-by-case....For one thing, it's a lot bigger river down there. It's a lot flatter, less gradient. I don't think they have some of the rip-rap issues that we do, but, boy, I don't know. It's almost on a case-by-case basis. You really have to look at it. It's

a tough one, especially since you're looking at the river all the way down. (*Sweet Grass County Recreationalist*)

Maybe there needs to be a type of educational thing....It is like building in New Orleans, and building below sea level, and then not expecting water to get in....But, you know, maybe that is something that needs to be done in addition to like building codes, etc. Yes, it would be lovely to have your home here, but a recommendation says 30 feet back, or whatever, because at some point in time, over a period of time, there is going to be some gradual wasting away of the property here. I don't know, maybe that is done. (*Sweet Grass County Residentialist*)

Any number of other conversations can be found within and across the interest group analyses. For instance, invasive and noxious weeds are a common concern, as are interests in wildlife and specific concerns regarding water quality. This summary addressed only the three dominant themes in hopes that the readers would be encouraged to further delve into the details of each interest groups' concerns.

Laurel to Springdale: Agricultural Interest Group Overview

Twelve interviews were conducted with individuals representing agricultural interests, including farmers and ranchers. Participants were recruited from referrals provided by the local Conservation Districts, the Yellowstone River Conservation District Council and the Montana Office of Natural Resources Conservation Service.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|---|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Laurel to Springdale: Agricultural Interest Group Analysis

I. Specifics of an Agricultural Perspective

A. Lifestyle and Way-of-Life

I like it here....I never wanted to do anything besides be a farmer or rancher. (*Carbon County Agriculturalist*)

This is a nice small town. I think the values of living in this area are pretty good compared to living in a big city. And it's what we like to do and what I've liked to do since I was a kid. (*Stillwater County Agriculturalist*)

This little place won't make a living. Everybody likes that life, but you wonder sometimes if it is really worth it. You stay so busy trying to really make it, to make ends meet. (*Stillwater County Agriculturalist*)

We enjoy watching the wildlife. The osprey, pelicans, geese, ducks....[There are] all kinds of birds down there on the river....We see bald eagles quite often, too, in trees along the river. The ospreys have been an exciting thing for the past three years. We look for them to come back every year. And they do. (*Sweet Grass County Agriculturalist*)

I can just kind of hermit-out here. (*Stillwater County Agriculturalist*)

[It's] just my livelihood, I guess. Now, like I say, I was born and raised here, and until I take my dirt nap that's where I plan to be. (*Stillwater County Agriculturalist*)

I think it's part of the American spirit that the land, as Thomas Jefferson said,...is the only pure thing. The only pure way to live was the agrarian existence, and he saw America as an agrarian society, and Alexander Hamilton saw it as a manufacturing city environment, [a] developed environment. Of course Jefferson was wrong. I mean, what developed was Hamilton's. But I still think there is this Jeffersonian spirit in America where the land is fundamental to their happy existence. That's what Jefferson in effect said, and it's changing, of course, isn't it? (*Sweet Grass County Agriculturalist*)

[The river] is the difference....It's either you'd have a crop or you wouldn't have a crop. And, if it wasn't for irrigation water, you just wouldn't have a crop....We're in a semi-arid desert region, you know, and so it's the irrigation water that makes the difference. (*Stillwater County Agriculturalist*)

Oh, yeah, we [go to the river], well, at least on a weekly basis....My wife, she was down yesterday with the grandson, and then she was down the day before, and she just loves to

go down there, and sit down there all day....You know, [I] call her on her cell phone tell her to get home, fix supper or something like that. (*Stillwater County Agriculturalist*)

Of course they all talk about nature—nature and this, that, and the other thing. But, you know, we're a part of nature anymore, too. You know, rattlesnakes and us, and everybody's got to get along. (*Stillwater County Agriculturalist*)

When farmers 'got their irrigating boots on,' that's their attitude. You know, if you shut his head gate off, you got a problem. (*Stillwater County Agriculturalist*)

It's a perfect little place and just leave it alone. (*Sweet Grass County Agriculturist*)

B. Land Should be Productive

I am not a scenic person....I will say it is just another hill to me but there are people that it means a lot to....I am not begrudging them, but if I can't use it, why it is just there? (*Sweet Grass County Agriculturalist*)

Production would be one way to describe my place....alfalfa, grains, things like that. (*Sweet Grass County Agriculturalist*)

I know...right where King Avenue exchanges there used to be a big 80- or 90-acre hay field there, and that guy would level that with a huge level on a big bud tractor, and now it's that land where...the Outback Steakhouse and Wells Fargo Bank and all of that is. It just makes me sick to think of how many hours he spent leveling that and first thing they did was come in and make humps and bumps and ponds and everything else. (*Sweet Grass County Agriculturalist*)

Watching will convince you that nature will take its course....It has worked its way into my meadows...and I've lost productive ground. (*Stillwater County Agriculturalist*)

Especially around Billings I hate to see all that good farm land is being paved over and houses built on it. There's going to come a time when they need that land for food production I think. (*Sweet Grass County Agriculturalist*)

There are a lot of people that are buying land on the Yellowstone now, not so much say from Big Timber down, but from Big Timber up. A lot of them are buying the land and they're not doing anything with it. Either irrigating it or not much at all, letting it just go back to wild....It ties up a lot of land that used to be available for leases or for grazing or something like that. And it makes that much more competition for the land that is available to lease. And it drives the price up a lot. Sometimes it doesn't even pay to lease it. (*Stillwater County Agriculturalist*)

C. Rural Ideals

I've become covetous of our privacy....[I want] an uninterrupted viewscape,...a refuge that helps us restore our soul...[and] a sense of natural things that are not disturbed. (*Stillwater County Agriculturalist*)

If you like to hunt and fish and use the out-of-doors, the river is really important. And if it's all rip-rapped, and a bunch of jet skis and everything are going up and down it, to me that would really spoil the whole thing....There's [still] a lot of solitude out here, although there's less now than there used to be....[Can] we make a living on the place? Probably not...[In the past] machinery was cheaper, and hey didn't have to put fertilizer on everything, which is expensive. Gas is expensive, you know. (*Stillwater County Agriculturalist*)

The land is valuable, very valuable, but I don't want to get rid of it....I think that I should have the right to keep my property. I really do. People that get a lot [in town] or maybe buy an acre, are so proud—they brag about it. Well, what does it feel like to have 35 acres taken from you? (*Stillwater County Agriculturalist*)

There used to be a lot of city people that had either grown up on a ranch or worked on a ranch during the summer, and they understood about agriculture a little bit....I think agriculture is losing its clout along the Yellowstone. (*Stillwater County Agriculturalist*)

D. Individual Rights are Important

Montanans don't like to be told what to do. (*Stillwater County Agriculturalist*)

It's your own property and you sell it to someone else. I guess they can do what they want with it. And most of the people that I know are good, but there can be some sour ones. (*Carbon County Agriculturalist*)

If I want to add a little addition on, I should be able to do it. But you can't just add on. You got to go pay for a permit. And that's the same thing with the ranch. You just can't, not that we were going to do anything, but we had a battle to get permission to build. Because I wanted to put the barn right back in basically the same spot that the barn was. And we fought, and they said, 'You can't have it where it was, it will wash out.' Well, I'm going to put it in cement in the ground. That old barn sat on a wooden foundation and it never floated away in the big flood. If I put this one in cemented foundation, that's going to float away? I mean, it's just stupidity. (*Sweet Grass County Agriculturalist*)

I think we need really good agricultural zoning around here, but I don't think that's going to happen. I just don't think the old ranchers will ever accept zoning, someone telling them what they can do with their land. (*Sweet Grass County Agriculturalist*)

[Concerning public access,...]the courts took our riverbank without compensation. (*Stillwater County Agriculturalist*)

We can't do anything with our rip-rap until August 15th because there is an eagle's nest across the road, and we can't disturb the eagle's nest. But, the damn eagle's nest is above the railroad. What is our construction over here going to do? But you can't do anything from, I think, April 15th to August 15th because you will scare the eagles. (*Sweet Grass County Agriculturalist*)

E. Outsiders Have Obvious Wealth and Different Values

There's so much money-pressure anymore for the folks who are out of town and got the bucks and they think they can do just about anything they want to. (*Stillwater County Agriculturalist*)

For some people, they can afford acreage like that and keep it for themselves for hunting and fishing....They put a gate across the road and locked it up. I called them...but they said they were going to let it go green....They've probably got enough wealth that they don't need that rent...[but the] people that went down there for years, they're disappointed, really disappointed they can't get to the river to fish....If they own it, I guess they don't have to give access. (*Carbon County Agriculturalist*)

I think the recreationists tend to think we don't respect the land or honor the land or agriculture people and they think they know a lot about it. But we manage it as it's our living. (*Stillwater County Agriculturalist*)

I think the State of Montana is changing a lot, because there are a lot of people coming in concerned about the river, concerned about the environment....And, I would have to say that you get some out-of-towners, like the people up and downstream from us that frankly have done a great job taking care of things, because they have enough money that they don't have to worry what the hay is selling for and what the cattle is selling for. (*Sweet Grass County Agriculturalist*)

I do think there's another side to it....[Outsiders] bring a lot of money into the community. And, like it or not, they cause property values to increase, meaning that if anybody wants to sell their property, they're going to get a good price for it. And, in many respects, [the new buyers] don't abuse the land. (*Sweet Grass County Agriculturalist*)

I think a community can have expectations, and can convey those expectations to new owners. And some of the locals want them to divide land up, get more tax money, but they don't realize that they're just transferring money from hand to hand. You get the tax money here, but you have to build more schools and more roads here for the people who are paying the tax, so where do you stop? (*Sweet Grass County Agriculturalist*)

So many of these ranches change hands. One guy has it two or three years and he is gone. The next owner is in Chicago. You don't get to know your neighbors. There is a tremendous turnover of wealthy people buying and selling. It is hard to keep track. We don't associate with them like when I was a kid. (*Sweet Grass County Agriculturalist*)

Free-flowing at whose cost? The people who want the river to run where it wants to run don't pay for it....I should be getting an award from the free-flowing folks because I've contributed a half-million in the form of lost land. (*Stillwater County Agriculturalist*)

But there a lot of agencies that want [the river] to takes it own course. Let nature take its course. It is doing it. (*Sweet Grass County Agriculturalist*)

II. *Agricultural Descriptions of the River*

A. *The Yellowstone is Big and Powerful, but Abundance is Threatened*

It's a big river. And at flood stage, it's really big. Like I said before, August to September, it gets really low...[but] I always liked that there was a source of water for the livestock. It never went dry. I don't think it ever has. (*Carbon County Agriculturalist*)

That river is a powerful force. It is a powerful, powerful thing. I don't care what man does, if [the river] decides it is going to go, it is going to go. (*Sweet Grass County Agriculturalist*)

There are about two of those big sandstone rocks left. If the river wasn't so high, you could stand on them....And I wonder where those [other] big rocks went. Where did my big tree go? It was just massive. Whoever's yard that landed in, it sure made a mess. (*Stillwater County Agriculturalist*)

It's a force; it's a force to deal with. (*Stillwater County Agriculturalist*)

The thing about the Yellowstone River, with such force that it has, with the snow pack that it can contain, and one thing or another, is that even some of these things that you can do, it can undo them. (*Stillwater County Agriculturalist*)

It seems to me that, with more population all the time, it's going to put a lot of pressure on the water that's in there. I think these big cities, and their primaries and all that—they use a huge amount of water. Maybe the river's big enough; I don't know. (*Carbon County Agriculturalist*)

It's clear. We would water our livestock at the Yellowstone a lot. (*Carbon County Agriculturalist*)

B. *Ambivalent Sentiments about the River's Character*

Absolutely beautiful....It is a wild and uncontrolled river. (*Stillwater County Agriculturalist*)

It is a trashy river. After that flood, there were refrigerators and picnic tables [in the river]. After the boat float goes down, it is a nightmare and you have everything from

beer cans to convertibles....So, it has its own problems. I know it is an old damn river but it needs some attention somehow. (*Sweet Grass County Agriculturalist*)

What is so interesting about the river [is that] sometimes, you glorify it and sometimes you think, boy, that is a monster. I just learn to accept what it does. If you worry about it, you can't do anything, especially when it is really doing stuff, everybody is helpless. Once it is on a rampage, you can't control it then. And you could put in a lot of work ahead of time and it still does what it wants to do. It tears out what you put in. (*Stillwater County Agriculturalist*)

I think the important thing is to recognize the importance of the Yellowstone River, nationally, but mainly for the future of Montana and its people. (*Sweet Grass County Agriculturalist*)

The river is a nuisance....The river is beautiful to look at if it's not eating at you. I pay taxes on something I'm losing. (*Stillwater County Agriculturalist*)

In some ways the river is a pain in the neck. You go down there and it [has] taken off five acres. Every year...it just keeps taking more and more. And so, that's why I'd say it's a pain in the neck. Nothing you can do about it. Just watch it go. (*Sweet Grass County Agriculturalist*)

We border the Yellowstone. That is important to me,...that we live right along the river. It does affect your life....It is home. Just home, that's all. (*Sweet Grass County Agriculturalist*)

The river to me is kind of mesmerizing, interesting. You never know what it is going to do. It is just nice to be watching it all the time. (*Stillwater County Agriculturalist*)

That Yellowstone River...is really...an exceptionally—well, I don't know quite how to put it, but it's really something....It's quite a deal. (*Stillwater County Agriculturalist*)

III. Living with the Yellowstone River

A. Memories of '96 – '97 Flooding, Ice Jams and the Power of the River

Well, it was about '96 or '97 when it flooded....All of this was under water because it was up about 30 feet. We couldn't get into our buildings or anything over here; it was all under water. We had about four feet of water....It damaged the trees in the meadow. It took three years to get it back in shape....We have probably lost 30 acres in that flood, and it is still taking ground. (*Sweet Grass County Agriculturalist*)

When I moved here, you couldn't see the river. By our turn off, it was over against the rock ridge. Since the flood, the whole channel has changed. I wouldn't touch what it is

going to look like in ten years. This may be an island again in ten years. You just don't know. (*Sweet Grass County Agriculturalist*)

Then, about 1998, we had those ice jams and they kind of jarred the rocks loose....Not knowing what was going to happen, maybe we could have done something, [maybe] added more rock. I don't think it would have helped. But it loosened those up and when the flood came, it wiped the jetty out. That was a pretty firm jetty. It lasted from the early '50s to the '90s. So, it lasted a pretty long time. (*Stillwater County Agriculturalist*)

The river is stronger than I am. I used to think I could fix it up....It was so pretty before, honest. It had meadows and trees, and I had it all cleaned up, but it's gone. But I said I wasn't going to do it again, but I've kind of cleaned up....I spent 12 years cleaning it up. It had a rock jetty, and after the flood came, the big flood, it ruined everything. It took 35 acres....I don't think you can stop it....I stood and looked and I thought 'that's just coming straight towards me,' and I was right. It was like you can't imagine....I'm not kidding you; it was kind of eerie....You see the river come, it was like somebody's mad at me—just cut me out. Have to laugh about it....But you shouldn't have a government organization that takes your money and then doesn't work. And they're well-paid and no one is responsible or accountable. (*Stillwater County Agriculturalist*)

A few years ago the river had been cutting quite a bit and they had an ice jam and it deepened the channel and it was pretty stable for a while. Now it is back to ripping and tearing and getting wider and shallower out here....It was more stable in this stretch out here until 1997 when it flooded. (*Sweet Grass County Agriculturalist*)

In the winter, because the river ran right behind our place, we would get ice from ice jams which would flood our place. The river would then flood, and we would wear hip boots all winter. (*Sweet Grass County Agriculturalist*)

But the other thing nobody ever thinks about is what goes on in the winter time with the ice....I mean, we knew about the floods when we built here, but we didn't know about the ice. The ice to me is a lot scarier. Well, like this last winter, November, the river froze....Everything backed up; the main channel on the other side of that island completely jammed up with ice. And then it got warm so all at once all the ice was breaking free. And in the middle of the night it must have really jammed because when we woke up in the morning, all the ice was gone, but the ice was piled maybe five or six feet higher than the top of our barbed-wire fences out there. And if I had been awake at the time, I would have been scared to death. (*Sweet Grass County Agriculturalist*)

We see ice jams come instantly, like we had thrown a dam right across the river. The same year we saw the 500-year flood, 1998, that winter, we had two ice jams right behind our buildings and in three to five minutes, there were probably 50 acres with two feet of water and icebergs along. One wasn't too bad. The other one really did the job on us—tore out a lot of pens and stuff. I mean, the river is kind of amazing. And, when it forms ice in just 24 hours, ice will start stacking up and look like the Yukon River. (*Stillwater County Agriculturalist*)

B. *The River Takes What it Wants Via Erosion*

I never know where my property line is at....The river takes a little every year. In real high water years, it's more aggressive. It takes fertile soil real fast....I'm not whining, I'm resigned....I've resigned myself to this in sadness. (*Stillwater County Agriculturalist*)

The river takes what it wants. I don't know how you can stop it....Part of my property is across the river [now], which is inaccessible to me or any good, and I can watch from my farm as people go get what they want. They get rocks for their flowerbeds, and that's just how it is. I pay taxes on those rocks. (*Stillwater County Agriculturalist*)

The river is going to do what it is going to do, and you have to live with it the best you can. (*Sweet Grass County Agriculturalist*)

Between our place and Laurel, the land spreads out and they can farm on that side of the river...and I know they've had trouble. They get flooded out. They're in the flood plain, and it gets real bad sometimes. It's a lot of trouble for them. (*Carbon County Agriculturalist*)

If you don't control it, all this bottom ground they call river frontage from the river to where it starts up the hill [will erode away]. Pretty soon, Montana ain't gonna be beautiful anymore. It will be down the river....It may take 200 years to do it, but it could do it. (*Sweet Grass County Agriculturalist*)

Continuously, every year [the banks change] a little bit....On our particular place...in the last 20 years, we've actually gained a little ground, where our neighbors on either side of us have lost a little ground. And why that is, I'm just not exactly sure. But that's just the way...the water flow was, or is. (*Stillwater County Agriculturalist*)

It floods, and houses go down because the ground gives out. People build because they want to live close to the river. Well, the ground gives out. (*Sweet Grass County Agriculturalist*)

My neighbor accused the other neighbor of stealing his fence, and I said, 'You're standing on the top wire, on the silt'....It's a continual thing, maybe of 27 posts there's two left, and the rest is gone....Now I think it's about ready to wash out my corner posts. I see the gate the last time I was down there, hanging over there. (*Stillwater County Agriculturalist*)

What could I do? What should have I done? (*Stillwater County Agriculturalist*)

People need to leave the river alone, and put up with whatever it does. Because if you lived with it for as long as we have, it changes, and there's no way of getting around it. I don't care how much messing around they do in it, it's going to do its own thing. (*Sweet Grass County Agriculturalist*)

C. *A Desire for Control and a Sense of Futility*

There are good projects that the Corps can and should do....Philosophically, as I look back 30 years, I'm not sure we could have stopped the natural shift of the river....Nature has its way....It sounds contradictory because the best design at the time might not work. (*Stillwater County Agriculturalist*)

You just live with...[the Yellowstone River]. You can kind of control the fire but you can't control the earth. I don't care what you do, you can't control the water. A fire may switch back on itself but a river is just going to go. (*Sweet Grass County Agriculturalist*)

I think there could be some small dams and things like that to slow the run off, and maybe support some of the streams a little better. You know, the smaller streams. And I think that would help control a lot of it. (*Sweet Grass County Agriculturalist*)

We need some stream bank stabilization in this area. That is all there is to it....[The river] will erode roads and bridges, etc. There is quite a difference in the way it is now from the way it was. (*Sweet Grass County Agriculturalist*)

The dam is a way to control the water, but I personally don't want to see a dam on it, especially if it's up above me. If they're going to build one, then build her on down the way. Hopefully this place would remain an area that would benefit the wildlife, and we can get along without setting right on the river's bank, you know; we can live without doing that. (*Stillwater County Agriculturalist*)

They need to study the stream bank preservation stuff that can be done to keep the river where it belongs, I guess. (*Sweet Grass County Agriculturalist*)

The river should be left ...in it's natural flow...[to go] where it goes. I agree [with] putting rip-rap along the side where you're not changing the flow of the river....You know all you're doing is protecting your land; the water flows the same. You're not sticking it out any, you're just putting it against your bank to keep it from eroding, but you're not changing the channel. (*Sweet Grass County Agriculturalist*)

IV. *Controlling the River with Rip-rap*

A. *Rip-rap Seems to Work in Some Places*

The rip-rap and the ironclad are the most effective if it is done right....I am more for the agriculture and saving your property. (*Sweet Grass County Agriculturalist*)

The man who owned it before me....spent a great deal of money on it....But, you see, [my losses] all could have been avoided because right at the Yellowstone River Bridge, after the water would go down each year, there was debris and a few rocks, and we would go in with a back hoe and put it back where it was....Then the government made a practice where you couldn't remove that again, so the river swung, and just ate it out.... We

should go back to the Army Corps of Engineers, and I should be reimbursed for that rock jetty, because, when I bought the property, that is supposed to be taken care of. And it's very expensive....Everything is so expensive....I don't plan to do anything. I don't have a great deal of faith in the Corps of Engineers. I think they should come out and justify what they did. (*Stillwater County Agriculturalist*)

Projects should be based on merit....[But] the scale that would be effective will never be approved....The 'controlled stream' won't happen....The massive concept won't happen. (*Stillwater County Agriculturalist*)

You know, there is a lot of agriculture that is being affected by what the river is doing....If it takes its course, it moves all over the place....It is going to do what it well pleases, but maybe we can stabilize it....We put a lot of rip-rap in since I have been here. Probably close to 500 to 1000 feet worth of rip-rap and we have applied for more. (*Sweet Grass County Agriculturalist*)

I think that you could spot control some of that, if they would let you in there to do, you know, a particular project. I mean, not major, not to change the river completely...but just kind of hit here and there and give it a little guidance. You know, I think that would help. (*Stillwater County Agriculturalist*)

I'm not sold on whether we should try to engineer the river with rip-rap....I think that's very unnatural. And, yes, [the river] will eat your property. It was eating into our land....but we never rip-rapped it. It's a natural thing. And I guess that's another thing: you got to let these streams be natural. I think you got to let them have their natural habitat, if you will. It's like an animal; a stream has a habitat, doesn't it? (*Sweet Grass County Agriculturalist*)

B. Rip-rap and the Potential for Shifting the Problem of Erosion to Elsewhere

The north side has a railroad track that has an affect on the hydraulics....Also, things done upstream have made a difference....[The river] works the course of least resistance. (*Stillwater County Agriculturalist*)

You can't go in and interfere with the river anymore. I agree that if you're going to go in and flood someone else, or hurt something—fix mine and flood you—that's not good....[But] when the road washed out a few years ago, they could have stopped that. (*Carbon County Agriculturalist*)

You can see it takes some planning. If you rip-rap one side of the river it, it'll start eroding, and it makes channels, and it'll bleed off this side over here. (*Sweet Grass County Agriculturalist*)

Secondly, it just changes the direction of the water and turns it....I'm saying that knowing that we've got a half-mile of rip-rapping that's been here since 1950. You know,

I'm sure it's protected the place, but I don't know what's it's done downstream. It may be partly responsible for what's gone on down along that corner. (*Sweet Grass County Agriculturalist*)

The most problems we've had have occurred since the people started messing with the river above us....They've made ditches, they've dug in the river, and it's changed the channel completely. And this happened before the flood....They just take it upon themselves to do what they want to do on their property. The main river used to run right beside our place. Now we get the overflow. It's made channels clear on the other side. (*Sweet Grass County Agriculturalist*)

We have a lot of nice river bottom down here and I suspect it will be gravel bar depending upon too many more floods. The river is making a big 'S' and it keeps digging here and it is rip-rapped over by the road and now it comes down in a big curve and that is what takes the dirt away. (*Sweet Grass County Agriculturalist*)

They rip-rapped the whole thing, and it...[sped] up the river [so] that it created a whole wet land where ever it wasn't rip-rapped you know, and it came out, and that's what the rip-rapping does. You know, before there was any of that, it had spread out a little bit everywhere, and it would fill channels and fill sloughs along the way. And I think that filling those sloughs and the channels, during high water is what helps to recharge the river in the wintertime. Because the river in the wintertime is lower than I've ever seen it last year. And it just seems like it keeps getting lower. And I think a lot of that's due to those sloughs and things not getting filled from flooding. (*Stillwater County Agriculturalist*)

C. Rip-rap and Difficulties Getting Permits

It's getting so difficult to get your permits, and this that and the other thing, that it's a little difficult to implement some of the plans that you might have or you think would work. (*Stillwater County Agriculturalist*)

I think it's a good thing that it's hard to get the permits, but I think they just have to start addressing some different ideas on how to control the river during high water and how to keep a lot of the water in Montana instead of letting it go on down to the Mississippi to support barge traffic. (*Stillwater County Agriculturalist*)

So, yes, there has to be some control as to how it's done, and [yet] not turned off completely. I don't think the bank stabilization should be shut down completely, but it is going to come to that. (*Sweet Grass County Agriculturalist*)

I've worried a time or two about some of these regulations that the government has on it to where you can't get some very simple things done in a timely fashion. By the time you wrestle with them, why, the condition has changed, or gotten worse, or whatever. That would be one of the complaints:...by the time you deal with all these government agencies, you can get a little bit goofy, you know. And then you get disgusted, and then

you get discouraged, and then you quit,...[and] just say, ‘The hell with it, they’re going to do what they want to do anyway’....But there’s got to be communication. There’s absolutely got to be communication. And you’ve got to have it from the engineer, and the hydrologist, and the old farmer/rancher, and grandma and grandpa, and everybody. And you got to talk about it, and discuss it, and see what you can come up with. That’s just that simple. (*Stillwater County Agriculturalist*)

D. Rip-rap is Costly and Few Can Afford it at an Effective Scale

Had I substantial resources, there might have been things that could have been done....[But,] the scale is overwhelming....To restructure an old jetty and rip-rap was three to five times the cost of the land....I didn’t have enough money because I had just bought the land. (*Stillwater County Agriculturalist*)

We have the permit and everything, but we didn’t have the money to. [It] costs too much. (*Sweet Grass County Agriculturalist*)

I have no education on how to tame a river, how to keep a river in its boundaries. I think it can be done but it would take quite an investment...The last I heard, rip-rap was \$125 a foot. It doesn’t take long to eat up a life savings. There is no guarantee. It has got to be something on a larger scale than an individual can do. The government will have to do it or nothing can be done. The county can just hold a little here and there....I am sure there is engineering out there that can fix it, but just putting a little bit here and there isn’t going to do it. (*Sweet Grass County Agriculturalist*)

I remember reading in the paper, after the 500-year flood in Livingston, there was a guy that went ahead and saved some ground. I can’t remember how many miles it was, but it costs him \$600,000. That’s what he put into it....He must have had a lot of money to invest, because it would take a long time to ever get it back. If it was for agriculture, I don’t know if you ever would [regain that money]. (*Stillwater County Agriculturalist*)

I had a local contractor come down and look at it, and he said it costs a hundred dollars a foot to put rip-rap or stream bank preservation in there. And then there’s no guarantee it’s going to stay there. (*Sweet Grass County Agriculturalist*)

E. Rip-rap and the Question of Fish

The rip-rap, they say, is going to scare the fish. The big fish are going to lie on the side of it and the little fish are going to come by. They are going to get them. That was the explanation I got. (*Sweet Grass County Agriculturalist*)

Well, it’s not nearly as attractive, and you know it changes the fish habitat, too....Well, depending on the time of year. If it gets very hot, they need the rapids....And you do get fish that will kind of hide in the big rocks of the rip-rapping. It just kind of turns the Yellowstone into a big irrigation ditch in my opinion. (*Sweet Grass County Agriculturalist*)

F. Rip-rap and the Question of Aesthetics

I know everyone is against rip-rap but the one we...[have] is a pretty high tech rip-rap system. You would hardly even know it is there....Basically what we are doing will hardly be noticeable. It will have a mat over it and trees planted....It will be effective, hopefully....I guess you would say it is supposed to beautify the river so if you are floating down the river you say, 'Boy, how did that form that way?' Not, 'What damn fool put that rock in there!' (*Sweet Grass County Agriculturalist*)

[The current rip-rap] sure beats car bodies...used along the river. The people that are floating down don't want to see car bodies. You got to have a little scenic. (*Sweet Grass County Agriculturalist*)

Well, number one, it's pretty ugly. (*Sweet Grass County Agriculturalist*)

Some people don't like the looks of it but 90 percent of the time when they go down the river they are two-thirds shot and they wouldn't know what it looks like anyway especially during the boat float....You can go in and throw in some rock but we just put some in down by the riverfront which is no big deal and I have seen bricklayers not do as cute a job as I did with the track hoe—just lay them in there and they just look like they are natural just all laid in there nice and even. (*Sweet Grass County Agriculturalist*)

V. The Public Demand for Access is More and More Problematic

A. Abiding by "Old School" Rules of Accommodation

All the time I have had it...everyone was welcome to come down and fish, the same way with deer hunting....I've always shared it. [It] never cost me anything to let them go down and fish....It was fine with me. (*Carbon County Agriculturalist*)

There are a lot of local people that use it. It isn't uncommon to see boats along here....We have had people ask to fish here that come from Billings or whatever....I figure if they are good enough to ask, they are good enough to use the river. We haven't had any problems. (*Sweet Grass County Agriculturalist*)

We're pretty liberal with letting people go down on our individual place. But then, the neighbors don't, so, consequently, you get the rush. You know, you get the people....You hate to see it, somebody with a couple little kids, driving clear to Livingston to wet a line. (*Stillwater County Agriculturalist*)

Trespass[ing] might be a problem, but I don't have that problem....Hell, if people want to fish, I don't care. I've never put up a 'No Fishing' sign or a 'No Hunting' sign. (*Sweet Grass County Agriculturalist*)

B. Access and Abuses

We had no problem when I was younger. People didn't do that; they respected you. If they wanted to go fish, they came in and asked. You know, they respected people that they don't anymore....That's right; they would even come in to our place and ask if they could put their boat in. I mean, it was all done decently, and it isn't anymore....I mean, we had no problem with it. As long as they come in and ask permission and, you know, did things right. (*Sweet Grass County Agriculturalist*)

Fishers leave everything from defecation to beer cans....Public access does not come with respect....I defy you to keep the fence up that is posted with private-property signs. (*Stillwater County Agriculturalist*)

I think, [in] the past ten years, the recreational use has really increased. And not just for fishing, but for hunting, too, on islands, and gaining access to your property and poaching from boats and stuff, whether it's waterfowl, deer, elk or mushrooms it seems like. (*Stillwater County Agriculturalist*)

What drives me nuts is a people problem....People have—and they're getting worse—absolutely no respect for private property....They shoot game from rafts....We can't patrol and we shouldn't have to. (*Stillwater County Agriculturalist*)

I used to love the river when I was a child, but now it brings in recreationists....They build campfires on [my] property. I found a bunch of marijuana,...And sometimes I wonder if I'm safe there. We had...an ex-con; he lived down there for six months....And last summer, in the middle of the night, I got a call that a girl on those motor skis had come off, [and] could the search and rescue go down there? I immediately said, 'Yes.' [Well,] they left the gates open with the cows. They couldn't do anything right....Not everyone, I don't mean that everyone's bad. (*Stillwater County Agriculturalist*)

With the fishing access law, people cannot get to my property if they stay within the boundaries where they're supposed to, but...I catch them coming up, and that really makes me angry. If I decided to go into Billings and camp in someone's yard, you know what would happen? It's the same thing, and it is worse....They put their sanitary napkins on the bank. It's horrible, [dealing with] their garbage. (*Carbon County Agriculturalist*)

I can understand that the river is a force of nature you can't do anything about. The human nature is what you can't...understand. They tell you now, pack it in, pack it out, and there's a lot of good people. I'm not saying everyone's that way, but there's always a few that have no respect for anything. And I'm sure you've seen it. (*Sweet Grass County Agriculturalist*)

There again, you'll have another person who'll kind of look after the one who's chucking the beer cans. You'll have another one pick them up, so there's that kind of deal. (*Stillwater County Agriculturalist*)

[There's] the world-famous hand gesture....[And,] I've had trouble with vandalism. You know, people pouring water in my fuel tank...and being cursed at for taking water out of the river and killing the fish. (*Stillwater County Agriculturalist*)

I don't like to hear the loud...jet boats....We go there for the peace and the quiet and tranquility. They're disturbing all the natural habitat....[Also,] there are a lot of the people that don't obey the laws. You're not supposed to go above the high water line...[but] they pull off and...go wherever they want to go. They don't care. I understand you've got to stop and go to the bathroom once in a while. That's a different thing....[But] garbage laying all over [is different]....And we've had people take things....There's no respect for the law. There's no respect for anyone who owns any property. (*Sweet Grass County Agriculturalist*)

It's the people that are the biggest problem, not the river. It's nature; there's nothing you can do about that, and it's going to come down whether you want it to or not. (*Sweet Grass County Agriculturalist*)

C. Denying Access: Avoiding Abuses and Liabilities; Generating Income

It isn't about trespass; it's about respect. (*Stillwater County Agriculturalist*)

We don't allow big game hunts down on our place anymore. And one of the reasons is that a couple of houses are fairly close to our property. (*Stillwater Agriculturalist*)

The first year I was here, I didn't know the area and I let people in to rifle hunt. Since that time, I just confined it down to bow hunters. You've got to be pretty careful where you're going to shoot or you're going to be shooting at somebody's house or the interstate or something. I don't want that liability. (*Sweet Grass County Agriculturalist*)

I have one...I let hunt, and I finally said, 'You need to do some work.' And he said, 'I'll help you with anything.' And he didn't show, and didn't show. Next year he called and said, 'Can I go?' I said, 'Yeah, but you owe me for two times, now.' I caught him in there last year. So, I'm not going to let people hunt. If you want to hunt and fish, go buy your own place. They've made it that way. (*Stillwater County Agriculturalist*)

My hunting rights are leased out,...mainly whitetail and turkeys. Maybe sometime in the future it will be for elk if they become more of a resident herd, but right now, they just come in during the summer time and eat up all my alfalfa in the fall. (*Stillwater County Agriculturalist*)

We have clients that come down and hunt on the place. (*Sweet Grass County Agriculturalist*)

VI. Life-forms of the River

A. Wildlife

Oh, we've got any amount of blackbirds, robins, sparrows. Just about any thing you want out there, we've got it. We've got two sets of eagles that share a cliff dwelling there. They stay...there every year....And there's a golden eagle and a set of bald eagles, also. Then we got all the ducks, and geese, and what have you. We've got these swans, now, here the last few years. And those...with the big bill, that catch all the fish....We saw 12 pelicans....about two weeks ago. Oh, we got lots of turtles, fish of all sorts: carp, trout, suckers....We've got whitetail deer. Last fall we had a little black bear, and we get a few elk that cross through there. Usually, the elk come in, and they'll calve out there in the spring. We even had a moose or two. And they pretty-much are the same thing—they come across from the Clarks Fork Valley, and calve out there, and go back over and up toward Yellowstone Park, by that drainage area. And we've got pheasants, and, oh, very nearly anything you can call wildlife. (*Stillwater County Agriculturalist*)

The type of animals that are there, that hang in there, I mean that's where they want to be. You know, evidently it has everything that they need. Especially where the ducks and geese [stay]....Although they do migrate some; we've got some I know that just stay there because we've got them year round. (*Stillwater County Agriculturalist*)

I support the herd. I just don't get to harvest any of them....We have 80 acres of hayfield down there, and it's all into alfalfa. In one night I saw 77 whitetail, 55 mule deer, and 38 head of elk on there. So, I was wondering why it wasn't growing faster....By fall, I think the mountain lion, or something, moved in, and it chased them all out of there....Yeah, we found two or three carcasses that were buried, and that's usually a lion. And then the wildlife left pretty quick....We've even had lynx down here. (*Stillwater County Agriculturalist*)

B. Cottonwoods

When these erosions begin to take place, these big cottonwood trees that are along the Yellowstone River start to hang out over the water, and another year or two they will get washed out and when they tip over, they come out with roots and all, and there's where you cause a lot of erosion right there. If they were to come along and catch those trees as they get in the leaning position, a year or two ahead, and stump them off, and either float the tree on down the river somewhere or hook onto it and drag it out, and deposit it somewhere, they wouldn't lose near the ground that they can lose now....Like I say, when those big cottonwoods go over, they cause a lot of turmoil....They bring out a lot of that old mud and dirt and everything just goes on down the river. (*Stillwater County Agriculturalist*)

Well, you know, if you look at our trees, they're all mature trees. Go down along the river there, there aren't any young trees anymore. Because the only time you get any natural cottonwood reproduction is during the flood years. The seeds come down, they flow down, they get imbedded in the mud from the floods, and that's how you get the

cottonwood stands....Flooding is necessary for the regeneration of the cottonwoods. That's a good reason why not to do anything, from my point-of-view. A lot of people disagree with me. (*Sweet Grass County Agriculturalist*)

And right now, the cottonwoods are seeded and the entire place is cottonwoods, and I am not going to do anything about it....Cottonwoods reseed with the flood, and it's almost solid cottonwoods now....I'm going to have all those cottonwoods. I just say I'm growing firewood for my grandson. The weed man is concerned, says you need to spray those. Why? I'm not putting money into those; it's hopeless. (*Stillwater County Agriculturalist*)

Well, [cottonwoods] give a lot of shade, and, at one point in time [we used them]. For instance, our old barn, the floor in it is made out of, probably four-inch slabs of cottonwood....It's in the old barn, in the old horse barn....And then from the fact of shade, and this type of thing, and habitat for the birds and one thing and another....And like I say, at that time way back it was used for lumber, and fence lumber, slab lumber. A lot of our corral fences were slab lumber, cottonwood and this type of thing. But, right at this point—in time, lumber-wise, they're not a thing of value, so to speak. (*Stillwater County Agriculturalist*)

C. Exotic Invasive Plants—Noxious Weeds

Any body of water is a weed source. So, it's just a given that that's the way it is and it's not a problem necessarily, but it's something that you just got to deal with continuously. (*Sweet Grass County Agriculturalist*)

The flood of '97 brought in the weeds,...foreign weeds....If you don't cut them every year, they just turn into a weed patch....It is basically a place for spotted knapweed and leafy spurge. Every time there is high water there is a new batch brought down. (*Sweet Grass County Agriculturalist*)

Well, if you don't graze it, it will just be more brush. I feel that way about it....The sheep, they used to clear brush,...mainly to control leafy spurge, which is a bad weed. (*Carbon County Agriculturalist*)

Spurge destroys everything else....Knapweed is hard to find, for me, until it blooms....I'm using Cimarron. I haven't used it before, but it's supposed to sterilize the seeds. I have a thing with weeds. I have it under control....[Sometimes] the bears kept me from spraying up there. I can't get by her babies. (*Stillwater County Agriculturalist*)

I have to tell you, the first 20 years I spent a lot of time spraying, but you never seem to get ahead. So the sheep we're putting in now will be eating the spurge. Frankly, the spurge beetles we put out in some parts of the ranch have gotten rid of 95 percent of the spurge; in other parts of the ranch, I can't tell that they've made any difference. And I'm sure it's just a difference in habitat. The island right across this channel right here, we can look at it when we get done, but this time of year there would just be a field of yellow

with all the spurge. And we've put some beetles over there, and it got rid of 90 percent of it. I don't quite understand why it worked there and it doesn't other places. But bio-controls make a huge difference. Not only that, they're really cheap. (*Sweet Grass County Agriculturalist*)

VII. Visions of the Future

A. Visions of Change

[Did you sell the land for agricultural purposes?] No, [for] recreation....They just leave things natural, not disturb anything, and not farm anything....It doesn't bother me any. (*Carbon County Agriculturalist*)

It's starting to look like home sites....There will be more houses all along, wherever they can buy small acreage....If [they] could get five or ten acres, if there's access to build a home, then I understand it's for sale, and they're going to subdivide it....The real estate man had called me up about it, says there's a guy from Atlanta, Georgia, who wants to build a house out there. (*Carbon County Agriculturalist*)

I think it's going to grow; more and more people are moving into the area....People are moving out of the cities to find decent property, get out of the rat race and come out here and develop this. There's a lot of construction going on in this county, but the population doesn't increase that much. They're mostly people that are putting in second homes. They'll come here in the summer for awhile and then they're gone. These people over here are building five brand new houses....They're only here just every once in awhile. They fly in their jet, stay for a weekend, and then they're gone. There's a lot of that going on. (*Sweet Grass County Agriculturalist*)

I hate to see the way it's going up, not just up here, but when you get down to Billings, and it seems like Billings just keeps creeping west farther and farther, taking valuable farm land and really putting some people out of business just because of zoning. And, all of the sudden, they were in agriculture trying to grow crops and they're having to pay taxes and you know they are a lot higher than they used to be, and they just can't afford it. (*Stillwater County Agriculturalist*)

See, that'll make it worse for me, and the less land we have to absorb moisture, which we don't get anymore, now as we start paving, then that makes it worse, too. I think probably the parts that man is trying to interfere with made it worse, too. It doesn't work....I think it will get worse, because there's no place to absorb the runoff as we build up. Some fool will build near it. Anywhere near it where you could see it, that's too close. I had some people want to trade me their yellow house in town for that pasture, and they were going to build on it. (*Stillwater County Agriculturalist*)

Recreation is coming on faster and faster; every year there...[are] more boats. In fact, I wonder sometimes if it's going to get to where it has so many boats in some places that they'll have restrictions for motors, and it'll be just float boats. I think maybe in the

future, something might happen like that, just because of the impact and the noise. I don't know if it will, but I look for something like that maybe to happen. (*Stillwater County Agriculturalist*)

Land prices are going up all the time. It is tempting for people to sell....You can't buy the land and make it produce enough to make payments. That is changed in my lifetime. (*Sweet Grass County Agriculturalist*)

I would kind of hope that it wouldn't change a lot. I hope that they keep the building and residential developments away from it. A certain distance, anyway. (*Stillwater County Agriculturalist*)

There are other things out there besides agriculture that they need to be worrying about. The Conservation Districts, including Sweet Grass County, have always been just concerned with just irrigation practices, diversion dams, and rip-rapping. They've never looked at it from any other point of view. (*Sweet Grass County Agriculturalist*)

Well, I think the county commissioners...have to realize that there's a lot of money that's in the county because of recreation and not just agriculture....The tourists are coming because of the scenery and the recreation and, frankly, part of the beauty of the land are these big unspoiled ranches. But the ranchers aren't being able to make a living on it. So, somehow or other they have to be able to cash in on the recreation too....Most of the old ranchers look at...the people who are interested in recreation as being a bunch of environmentalists, which is kind of a dirty word around here. (*Sweet Grass County Agriculturalist*)

It's changing rapidly....I was talking today to a man selling his ranch who has two offers on it right now. And I think that a lot of people don't realize how quickly it's changing....I think Montana needs to decide, do they want tourists?...Montanans need to sit down and decide the future of Montana, plan it. What do they want it to be? Want it to be this? How do you keep it this way, or make it this way?...It's going the other way....[Montanan's have] got to be the author of the future. They've got the opportunity, now, because it hasn't been ruined like many places in America....Seize this opportunity, and do it together, work in a cooperative way, and work out the future. Well, that's a lot to say,...[and] hard to do. (*Sweet Grass County Agriculturalist*)

I think the attachment to the land is what's going to save Montana from over-development. It's what's going to be the thing that will make more people to give donations to conservation easements or try to protect their land or try to sell it to someone they don't think is going to kill it—that kind of thing. (*Sweet Grass County Agriculturalist*)

Is the tax structure the way it should be? Or should the tourists pay more and give Montanans better...schools, roads, etc.? I think taxes are too low. And, under that argument, they should raise the taxes, and tax these new owners. Now, I hate to say this, but I know of municipalities that tax the non-resident owners more than the resident

owners. Now I don't know whether that's legal, but they do. (*Sweet Grass County Agriculturalist*)

B. Management Priorities

I think that sort of thing is critical: to leave a fringe on the river undeveloped, to keep the water as pure as possible, to try to work on the tributaries, be sure the ranchers have adequate water, but don't have any more than they need at the times they need it. I think they're working on all that. But I think it'd be great to get people to sign a voluntary thing that we won't build within 200 feet of the river. (*Sweet Grass County Agriculturalist*)

Being an Ag individual,...of course I'd want agriculture to have a priority. But I do know from when I was on a Conservation District, that drinking water comes first, then Ag water, which kind of makes sense, too. (*Stillwater County Agriculturalist*)

A lot of people are switching to center pivots and sprinklers that have no recharge to the ground water. It will put on just enough to feed the crop, and a lot of the moisture they do put on goes up in the air to evaporation. That's all water that should go on the ground, I guess. Normally we would irrigate with flood irrigation. (*Stillwater County Agriculturalist*)

I don't know if those programs [for rip-rap] are available anymore. Well, if you signed up, you could sign up with the local ASCS office, and jump through the hoops and their engineer would come out and look at the project. They would do all the cost analysis. Then they would cost share it a certain percentage. (*Sweet Grass County Agriculturalist*)

I really do believe in protecting the river as far as pollution goes....I haven't gone right up to the stream bank and sprayed weeds. I've got sprinkler irrigation so I don't have any waste water from my irrigation that goes back into the river....Everybody's got to have water. It gets messed up and it's not good...because wildlife and everything is affected by it. I think that it is our lifeline for everybody....If there was an individual that was polluting the river, intentionally or whatever, water quality probably would be higher priority than their property right. I would think at least equal....It concerns everybody if somebody's messing up the water; nobody has the right to do that. (*Sweet Grass County Agriculturalist*)

Laurel to Springdale: Local Civic Leaders Overview

Fourteen interviews were conducted with individuals holding civic leadership positions, including city mayors, city council members, county commissioners, flood plain managers, city/county planners, and water/wastewater treatment managers. Participants were identified through public records.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|---|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Laurel to Springdale: Local Civic Leaders Analysis

I. Community Complexities

A. Thinking in Terms of Priorities

Two things come to mind right now. Although I believe in personal property rights,...I believe, too, that...not everybody is going to get everything they want. It just has to be that way. (*Stillwater County Local Civic Leader*)

Public safety has to be number one. Number two is probably...protection of property rights....I would put a high premium on property rights. (*Sweet Grass County Local Civic Leader*)

Montana has a lot of small communities....I don't think they will survive unless they invest a lot of time and you start to use the Yellowstone as an asset. You have to get [the young people] to come back instead of leave. There are some really neat communities. I think those along the Yellowstone have a better chance than those away from it. I grew up in a community that I loved enough that I wanted to come back to it. I would hope that my kids and grandkids would have that opportunity....I just would like to see all our communities...keep the Yellowstone as pristine a river as they can. I really think we need to utilize it more. (*Stillwater County Local Civic Leader*)

I think we're going to see a lot of change because we have endless amounts of subdivisions going in. That brings a lot of problems with it. And they're wonderful people. We have doctors, and veterinarians, and all kinds of people living out in the hills here. They just want to be left alone, but they're going to get terribly bored after a couple of years. And we just wait for that, so we can put them to work as a volunteer. They're really wonderful people. (*Stillwater County Local Civic Leader*)

I do have a concern for the next ten years....We're losing our ranching community to subdivisions, and many of those were subdivided without proper roads, proper review, without water. They're hauling water. (*Stillwater County Local Civic Leader*)

In regard to this Yellowstone River study, years ago they got a grant, somebody did, [and] people began looking after the Yellowstone. I went to a couple of their meetings, and I couldn't believe what I was seeing. There were a bunch from DNRC [Department of Natural Resources and Conservation] and those groups—that was all that was at the table—there were people from the university, people from the City of Billings, the fishing people, Ducks Unlimited, all these nonprofit groups. They had a token rancher there who lived 30 miles north of Big Timber and he didn't even live on the Yellowstone. On the way home I thought, 'What kind of a deal is going on here?' I made a list of all

the folks who lived on the Yellowstone River, and checked, and not one of them were called. Yet, they were setting the future of those people. (*Stillwater County Local Civic Leader*)

I want people to get along so that, in the end, we have a free-flowing Yellowstone River that behaves itself—if that's possible. But I really believe in people respecting others' thoughts, and not doing things just because the law is on their side, or [because] they can [afford] a lawyer. They can threaten people and get away with it....There isn't a problem that can't be solved if we work on it and reach a little consensus, but some people are so ticked-off that they won't come to the table. They know that they won't be treated properly....There's enough of these high rolling dudes in the country that they intimidate folks....Meanwhile, the river runs. I'm going to start a new soap opera series and call it *As the Still Water Ripples*. I tell you, we could keep that thing running for years. (*Stillwater County Local Civic Leader*)

Oh, yeah, sure we can [have management]. You know, private property rights are hard to...step on,...but there's sometimes when, maybe, you have to do something, or [you have to] mitigate,...or hope, or give them a carrot, or whatever. (*Carbon County Local Civic Leader*)

[We] try to protect the people that have been here with their agriculture. You know, irrigation ditches. Things that have been there will be there. And [we] try to make sure that nothing infringes on that. (*Carbon County Local Civic Leader*)

We own five acres down by the river, and they want to tax you really high even if you don't develop on it, because it is near the river. That is not necessarily an asset. It could disappear. (*Stillwater County Local Civic Leader*)

B. Roads and Bridges are Central Concerns

Roads are probably the biggest thing. They take a relatively big part of the budget. Roads are something that everybody uses, and we have a lot of problems with them. We can't afford to do all of the graveling we need,...[and we can't afford] to replace all the bridges that should be replaced. (*Stillwater County Local Civic Leader*)

Well, the river keeps washing the roads out...and we're trying to get...funding to...keep [the river] away from the road. It's very frustrating trying to deal with the different agencies that don't want to see any rip-rap or any protection. They want to let the river go wild. But that sounds good, but it doesn't really work in real life....We know how to fix it....We could fix it, but...you have to get permission, [and]...they won't allow you to put rip-rap in it. (*Sweet Grass County Local Civic Leader*)

One of our obligations is to keep the roads and bridges open, and that would be for emergency services primarily but also, for...school buses. (*Stillwater County Local Civic Leader*)

The road washed on the Clarks Fork. We had to haul a lot of rip-rap in, and, what we did was, we just armored the bank...a little bit, and put a couple of those weirs in, the Bendway [weir]. We did that in two different places to save the road. The Clarks Fork is a wild river. (*Carbon County Local Civic Leader*)

If they would have listened to the old-timers they could have saved a few billion dollars and kept the Joliet Road from washing out. They put in a dike with big boulders and logs, and it diverted the river. Eventually, it eroded, and the county didn't pay attention to it, and it washed the road out and took farm ground out. That is the problem that is inherent everywhere. They like to use, and ultimately abuse, the assets. You have to invest time, and money, and effort to help the river survive. (*Stillwater County Local Civic Leader*)

When this lady developed this huge holding out here, 4,500 acres, she just kind of put in a narrow little road that's rocky and it's like negotiating the Yellowstone River when the water's down. It's rough, terrible. You can't get emergency vehicles in, you can't get people out and when we have a fire, we really worry. (*Stillwater County Local Civic Leader*)

The good old Yellowstone is a cantankerous old thing. That river is wonderful, but it's also wonderful to watch it. It's going to go wherever it wants to go. I'm kind of torn...because we have people [who] defy us to do any rip-rapping, or to save a public structure, or anything like that. We're not supposed to do that, I guess. That's what I'm hearing. But, darn it, you've got a two million dollar bridge sitting there, and the thing's washing out, you better do something. We can't shut all the traffic off....This bridge down here was in jeopardy. So they brought in a lot of rock and fixed it. It's fine. We had it protected....We've, [also] had some subdividers that have gone on their own and put in some Mickey Mouse things, jetties. But it really didn't upset the river a whole lot; it's got a mind of its own. (*Stillwater County Local Civic Leader*)

C. Flooding and Safety Concerns

In '97, when we had high water, it was about six inches over the road. That caused a problem down here. I have had it surveyed. There is just a low spot in the road. It came really close to trying to take out the bridge. Maybe seven, eight or nine years ago, they were dumping huge boulders to try to stop that from happening because they were afraid of losing the bridge. If you look at the river, it is coming straight at the bank. That is a tremendous amount of force in that area. If the bridge washes out that is catastrophic for these people. Stillwater Mine, agriculture, even getting to work for people would be a burden. The road they built has already gone to pits. (*Stillwater County Local Civic Leader*)

[Ice jams] cause flooding....They dammed it up, and [the water's] going to go somewhere....[In the past we would] blow them up....I don't think they hardly do that anymore...because it could just move the ice jam down to the neighbors. (*Sweet Grass County Local Civic Leader*)

In the winter you can have ice jams that will block things, and there can be flooding in the wintertime as a result of that. Or damage from the ice itself. It's something that concerns us, and we are looking out for it every winter and every spring. (*Stillwater County Local Civic Leader*)

Some ranchers and farmers [might be] flooded. I don't know if they are or not but that's the potential, and some years they do. (*Stillwater County Local Civic Leader*)

Well, the river's pretty darn high now, and this is the time of year when we can easily get calls from people playing on the river in their jet boat, and...somebody's overboard. And our county has to initiate a search and rescue effort with our sheriff's department. (*Stillwater County Local Civic Leader*)

I don't think people should build too close to the river, for their own safety. By the same token, I am a strong believer that the river belongs to the people, and they should have access to it. It is limited access now. (*Stillwater County Local Civic Leader*)

They're demanding county services,...[but the people in subdivisions] don't want us around normally. They don't want to pay these 'high' taxes,...[when, really,] our taxes are cheap. (*Stillwater County Local Civic Leader*)

Subdivisions are fine, but they've got to think a little bit and not depend on local government to bail them out or...to come and get them. (*Stillwater County Local Civic Leader*)

We don't have any setbacks here. In my view, the reason we don't is that,...once you get beyond safety,...whether 300 feet or three miles, setting an arbitrary number doesn't give you flexibility. Some people want to address it for more of an aesthetic point of view. It is strong in this county. That is a local issue. You aren't dealing with the public safety, or resource damage [due to] bank channelization. You are dealing, very much, with local issues and [with] what importance people put on specific criteria in their community. (*Sweet Grass County Local Civic Leader*)

D. Water Quality Concerns

Septic systems [are a concern]....They're too close together, and [too close to] their wells, and it's just a mess. And [there's] nothing you can do about it. Some were put in as, 'Oh, we're going to be using it for summer homes, so we'll just have storage. We'll just have a holding tank.' Well, it turned into year-round living, and a hole got poked in the tank, you know. So, probably, it's flowing out the bottom into Rock Creek...and there is not much we can do with them. Just don't want any more of them. We're trying to...put their feet to the fire, and say, 'Now, you've got a holding tank. We want records, public records.' So, we're working on that area. We don't allow any holding tanks any more. (*Carbon County Local Civic Leader*)

We try to be real careful on the subdividing....Of course, the ‘perc’ tests [determine] both: how the water flows through...[and] how high the water table is. The testing is supposed to be done over a year’s time, so you have your whole season....[Regarding septic systems in] wetlands, we try to, naturally, stay away from that because that’s a DNRC or a DEQ situation. (*Carbon County Local Civic Leader*)

There’s also problems with cattle contaminating in the river, because they drink at the river....And that’s a problem all over Montana. Livestock feeding or drinking in the river, and, of course, the sewage runs in. (*Stillwater County Local Civic Leader*)

It’s better if the cattle are not running in the stream. You know, that just makes sense. Erosion-wise,...I don’t think they really do any harm, except where there’s an overgrazing situation....It’s like anything else, it’s not bad, unless it’s overdone. (*Carbon County Local Civic Leader*)

Probably the biggest problem, no matter where you live, is the runoff from agriculture, either from runoff with the pesticides...[or] runoff from the cattle waste. And if it’s a private property, they have to be aware that [runoff from their] private lands can get into the river systems. (*Sweet Grass County Local Civic Leader*)

Fortunately, fast-running waters are self-cleaning....We use the water and [we] make sure we take care of the sewage and [we] don’t pollute the river. It has been years since we have flooded enough to cause problems. (*Stillwater County Local Civic Leader*)

E. Growth is Necessary and Demands Some Caution

Development will always occur. [The community] is either going to...grow, or it will demise. You really can’t maintain the status quo. If you aren’t growing, you’re probably going to go down. You can’t maintain the status quo. (*Stillwater County Local Civic Leader*)

We’ll grow at a rate of two or three percent a year. Maybe a little bit more because some of that becomes geometric after a time....[The growth will affect the river] indirectly only....As [our] infrastructure improves, and things grow, this county will just have more visitors, more tourists, and more people from surrounding areas coming to visit and play on the river. (*Stillwater County Local Civic Leader*)

We are trying to figure where any new growth will happen. Most of it is happening west of town. We are looking at extension of power and annexation. The city is in the process of adopting a growth policy and looking at impact fees. Those are the fees charged to developers for the expansion of city services. (*Sweet Grass County Local Civic Leader*)

I would like to see the continuation of the small businesses, the economic base that we have now. Columbus could be bigger, but I would hate to see it four times the size it is, in this little valley. [There] are two areas of new building in the city limits, recently,...[but] most [of the growth] has been out in the trees....Columbus, the town, has grown by 400

people in ten years, [yet] there are 2,000 [new] people within a ten mile radius.
(*Stillwater County Local Civic Leader*)

There is a guy from Portland...looking at this area [as a place] to build 200 homes. That is going to County Planning, first, for a subdivision [ruling]....We have to know if the system will handle [200 new homes]. (*Stillwater County Local Civic Leader*)

It's very special to have this river here, and, of course, we want to protect it. We want to make sure that any housing developments follow the DEQ rules, [especially] septic should be placed according to DEQ. I guess I don't believe in setbacks. I think the property owners have the right to be as close to the river as they want, without damaging the river. If they do not damage the river, I think it's their property line. (*Stillwater County Local Civic Leader*)

II. Sympathies for Historic and Newer Activities

A. Farmers are Historic Base and Generally Good for the River

Ranching and farming:...that's probably the oldest base. The Stillwater Mine... is well-received by most people....I don't want to imply that [the residents] are mostly ranchers, probably not—they're probably in the minority....[And] now, it's expanded beyond agriculture and mining....Recreation is growing, and I think there's a correlation with that and the subdivisions, the population growth that we're experiencing. It's a low percentage, but it's growing, and probably at a rate that we can manage, so that's good.
(*Stillwater County Local Civic Leader*)

I think that preserving the agricultural aspect of the community is really important and a lot of it can be done through education. I don't think it is a win-lose situation....I think, for the most part, ranchers are pretty responsible. I think that they can do things better, but that is more of an educational process than intent to harm the resource. (*Sweet Grass County Local Civic Leader*)

[The] ranch population, they've been here, but they're dwindling off. The kids still want the place,...but it's awfully hard....And I do notice a difference—those [ranch] people really cared. They didn't want to destroy our streams, or pollute them, or anything like that. They respected it. And now we've got a group of people who also respect it, but with a different set of values....They're coming here from another state [where] they found out what it's like when something happens to pollute the stream, or when sewage runs in there, or whatever it might be. They come here with that bit of knowledge, and their values based on that, so they're demanding a different use of the stream. [Also, they want] more access, better places to dump their cans and garbage, and all that sort of thing....I just think there's a difference in values and a difference in cultures. (*Stillwater County Local Civic Leader*)

There was an independency that was so important, and a hard-work ethic, and a real caring attitude toward the land, the ecosystems. If there hadn't been, they wouldn't have

survived. They tried to eke out a living, and it was very tough. They did the best they could with nothing....I think our values go back to some of those things, a real caring way to eke out a living. So there's an economic side to it. (*Stillwater County Local Civic Leader*)

If you have more development, you're going to have less agriculture, and less irrigation. And the flood irrigation recharges the aquifer. So, if you have more development, [you have] less farming, and less water going into the aquifer. (*Stillwater County Local Civic Leader*)

I know it's the last free-flowing river in the United States, but [keeping the water in Montana] would be one thing I would like to see....Water is so precious here....It's sad that they didn't do it in the past....If it was for power thing, maybe it would happen—but not for agriculture. (*Stillwater County Local Civic Leader*)

B. Desires to Experience Nature are Understandable

[There's] fishing, the peacefulness of the river....Like right now it's high and muddy, in a month it'll be calming down, clearing up, and then in the fall, you get your brown trout spawning and, you know, lots of different things going on. You have your big geese out now, which just hatched, cranes, and everything out here now. It's a beautiful place to visit. I think we're lucky here. It's so close; we're right here. (*Sweet Grass County Local Civic Leader*)

[It's used for] boating and fishing, primarily. There are a lot of photographers, but they're doing that in conjunction with something else. They're just on the river, enjoying the scenery, or they're fishing from the shore or from a boat. (*Stillwater County Local Civic Leader*)

I think even the people that live in Billings, and Yellowstone County to the east consider us their playground, which is fine. If I lived over there, I'd want to come over here, too. (*Stillwater County Local Civic Leader*)

A little guy down on the river said, 'I have seen the elephant and heard the owl.'...He had been to town, he had seen the city, and he liked the rural part. (*Stillwater County Local Civic Leader*)

They want to do what's right. They want proper sewer and water system and they don't want to affect their neighbor's either. So they want to make it work; in most cases, some people don't, but most people do. Most people want to protect the environment. (*Stillwater County Local Civic Leader*)

If you lived somewhere where you didn't have rivers then maybe you would realize how valuable they can be. It never stops and you have the wildlife that needs the river and a lot of the cover that rivers provide. It is what it has always been. Nature and we have to live in harmony as much as we can for everybody's benefit and everything. You can't

always look at it...financially. Is it financially profitable for you to do something that may harm the river? You can't do things to harm the river. (*Stillwater County Local Civic Leader*)

C. Boat Floaters Generate Revenues and Liabilities

We have had a boat float; it was called the Mayors' Boat Float that started way back. It was sponsored by the mayors from Livingston to Billings. That put a lot of people on the river. Columbus was actually a stop and it got out of hand....The kids wanted to come and party and we weren't able to cope with it. It wasn't the floaters, it was the spectators....The Old Time Fiddlers...they wanted them to get a million dollar liability policy to use the park....I wish there was a way that a town could manage that. (*Stillwater County Local Civic Leader*)

But there are some differences of opinion that I hear, especially when the water's low, and you hear complaints....That's the only time there's a problem....When the water's low, that's the time when you start hearing stuff....Well, the fisherman come long distances and pay a great deal of money to fish, and if you tell them that they can't fish during certain hours of every day, then they're upset....They spent money to get a good fish in the Yellowstone River, and by golly, they should be able to get one. (*Sweet Grass County Local Civic Leader*)

We have lost money here in Columbus because we lost the boat float. That was our own fault. It brought too many people partying but it was a tremendous source of income. (*Stillwater County Local Civic Leader*)

D. Recreational Access Problems

Access to the river is very important, but in places, I guess especially this bridge in Reed Point, there has to be cooperation between the county, the landowner, and the recreationist, as to what we can provide. What counties are legally required to provide, and sometimes that's not clear. I don't see 'No Trespassing' signs where the fence meets the bridge. I've never seen that, so access to the water through that way is possible. (*Stillwater County Local Civic Leader*)

[One] family, they had it for years and years. Well, in fact, I think it was probably from homestead days, and they allowed a certain amount of fishermen to access the Yellowstone...through their property. Well, it sold, and that's no longer available because [the new] folks didn't want to give access, and they don't have to. So...there was an area that used to be accessed, that it's gone. And, the new people that come in, they more or less locked the gate, and they're very territorial. (*Carbon County Local Civic Leader*)

I would like to see nice fishing access, accesses developed that Montana Fish, Wildlife and Parks might have to spend some money to preserve the appreciation of the river. And

good parking....They need to step up and get some good spots, and they're going to have to pay for them. (*Stillwater County Local Civic Leader*)

Part of it is the public needing to police themselves, [but] there have been some places that have been shut down without provocation....I think there are more and more fishing access sites and recreational groups realize these problems and are trying to establish cooperative working relationships. (*Sweet Grass County Local Civic Leader*)

One way [the river is important] is for agriculture...and the other is recreation. I like to float the river. I like to fish the river. Another important thing to me is the property rights of the people that go right up to the river, that their rights are honored....I think they have to respect each other, where they're all coming from. Agriculture is trying to make a living, and it's very difficult....We all want to use the river, but sometimes the recreationist is not respectful of the river....There's garbage and feces....They don't take care of it. Property owners see that happening occasionally. (*Stillwater County Local Civic Leader*)

I think people in Montana and this area would like to have the river accessible to the public, and not have a lot of private ownerships. We have good accessibility now with the fish accesses and whatever, but I think that most people in this area would like to not see too many homes near the river. (*Sweet Grass County Local Civic Leader*)

III. Attentiveness to Legal Frameworks

A. Thinking Like an Official

We're responsible for all of the Montana statutes, whether we know them or not. (*Stillwater County Local Civic Leader*)

I fully support the laws that we do have....The river itself and the water quality and quantity needs to be protected. (*Stillwater County Local Civic Leader*)

Flood plains are sacred. We just cannot break in flood plains like we used to. There are some things...[that the] law requires: you have to have a three-foot differential, the land where you're going to build your house has to be at least three feet above where the water table is. Well, if that's based on a dry year, and you build your house and then you have average years again, or normal years, you might have a problem. The law doesn't account for that. (*Stillwater County Local Civic Leader*)

For example, [with] a bridge, you go through a permitting process. You make an application to the flood plain administrator and you will require a 310 permit and you may need one from DNRC and Fish, Wildlife and Parks. You are likely to need a permit from the Army Corps of Engineers. This is one aspect and primarily the local area. We look at the FEMA maps and see if it is zoned for that area. What is the base flood elevation? What effect will it have on the base flood elevation? We prohibit anything that will increase the base flood elevation by more than one-half foot or more. It depends on

what kind of materials is used, what kind of rip-rap, what kind of channelization, what kind of fill material. We require an engineer certification. It is a process of gathering the plans, gathering the engineering analysis, the hydrology analysis, and the information from DNRC if they have it and then site inspection and review and then issuing a permit. Those permits are issued on condition of certain requirements. (*Sweet Grass County Local Civic Leader*)

My biggest concern is it is so hard to keep businesses in Columbus where they are profitable and stay in business. When that happens, a lot of the lifestyle that used to revolve around the smaller communities starts to disappear. It is hard to stay in the community, even if you like it, if there is no employment....There were big businesses that wanted to come and we didn't invite them. We need to change that attitude. The city council and the city and county government both will start changing their attitudes and policies to invite and help businesses try to make it....We sit in too nice of a place for it to keep deteriorating. I don't know how we will do it and how it will affect the river. We have lost a lot of opportunities with the Yellowstone. (*Stillwater County Local Civic Leader*)

The Conservation District, they issue [the permit] for any activity within the flood plain. They have certain jurisdiction and they have beds and banks. Flood plain is broader. Usually there will be a 310 and a flood plain permit required. It could happen that they need a 310 permit and no flood plain because the base flood elevation is low enough that we are not concerned with the 100-year issue. (*Sweet Grass County Local Civic Leader*)

There are laws, but they aren't enforced. We lose a lot of water. There are people that say we have water rights. There are a lot of mistakes in the past that have been made with regard to that. Most of that watershed is on federal lands, I would imagine. If that is the case, then it is everybody's water. In a way you can say it is everybody's water. You go back to laws that have been forever and need to be changed and you won't see that in my lifetime. I think the old-timers care more about it. They would get out and work and spend weekends trying to correct something they saw that was wrong. (*Stillwater County Local Civic Leader*)

B. Local Values and Local Control

What happens sometimes is the state legislatures will say counties should do this, however if they want to apply it locally, they have to pass an ordinance. What that allows you to do is enforce it. Without the ordinance, even though it's a state statute, if somebody's violating it, we can't send the sheriff out. (*Stillwater County Local Civic Leader*)

I am an advocate of local control. I think it should be a local thing....They know that community best. They understand the needs of the community and the different constraints. It should be a ground up focus. I don't think you can say it is 100 percent local. If you are dealing with a river like the Yellowstone, you are dealing with

something that affects other states and areas....Local control should be primary, but not the only consideration. (*Sweet Grass County Local Civic Leader*)

This county does not have zoning at this point....I'm not opposed to zoning, per se, if it's done properly. I think there's a lot of people here who are outright opposed to zoning,...but I don't know if we're at the point where we need that. There are good things as a result of zoning....I don't know if I would predict that for the next ten years, but there will come a time when zoning will be needed and people will be clamoring for it. So I would say future generations will have it better in that regard. So, if you buy property in a certain area, you can kind of predict some stability. (*Stillwater County Local Civic Leader*)

I'm not saying we're ready for [zoning]....Over time,...that may not be a bad idea....I think folks are more and more receptive. A lot of the people are coming in....It's a nice place to live, so they're coming from everywhere. You know, Californians,...Texans,...and they're drawn here because it's not like where they're coming from, yet they want to make it like where they're coming from....But they also have good ideas. They come from areas where they have more progressive local governments...and are wondering why [not here]? (*Stillwater County Local Civic Leader*)

When you are dealing with regulations in a local community, I think there needs to be some minimum standards that would apply across the board so you can't have something happening in one community that would be detrimental to another community. Beyond the minimum standards, you have to let the local governments make some judgment. I think in many different areas those voluntary considerations can be beneficial. It has to be a combination. You can't have the local stuff in a vacuum because it affects other areas. You have to take into consideration the needs of the community. (*Sweet Grass County Local Civic Leader*)

Locals can often [offer] the best solutions because they have a vested interest in the land, in the community. They have, often, known each other for a long time. We have a lot of non-residents that live here three months at a time, [but] when locals sit around and have a cup of coffee, talk things over, they will often lead to the best results. It is a long, drawn-out process, and I think that is one of the better ways to go about things. You can talk to your neighbor, even if they are different than you are. (*Sweet Grass County Local Civic Leader*)

Keep the feds out of it. It should be done on a local basis. The people that have the most clout in the county are the county commissioners. They are local people. For the most part they know what has happened. They are accessible. They are common sense individuals. They should really have the final say on it. Community planners...[are] part of it....[It's] like designing a sewer system. You could get a local guy [to] do it for \$100,000. No, you have to get engineers and all the other stuff, and pretty soon it is two million. (*Stillwater County Local Civic Leader*)

Some of these things have gotten so expensive to do. We have done it to ourselves in a lot of ways. The state can be involved but when the fed gets involved, the feds see that one route is supposed to cover everything. There are so many strings attached with federal bucks. (*Stillwater County Local Civic Leader*)

That's one thing that affects the river itself is the ability for people downstream, in Iowa, Missouri, Louisiana, places like that, to dictate what we do with our water here....They claim previous water rights; all they want it for is to float their barges so they can move their product less expensively. And I don't think that's a good enough reason to tell somebody, 'You release your water to us.' That lowers our dams; it hurts our fish populations. (*Sweet Grass County Local Civic Leader*)

IV. Regulating Activities On and Near the River

A. Flood Plain Maps are Credible Means of Regulating

It is meander-land, and nobody can own that....There were river changes in that '98 flood, and, of course, some islands were created, and it washed down banks....Some people lost acres and acres of land....I know of one group who ended up with an island, and they claim it's theirs, because the river ran right through their property and created an island....Nobody pays taxes on it....For example, if this is a lake, and the water comes up in high water years to cover most of [the land], you wouldn't think that would reduce your taxes, [and] it doesn't. Or, if it goes down, and you can farm this for a while, you still don't pay taxes on it. But, you can't claim it either;...its no-man's land....[It] used to be that the Corps of Engineers could come in and just change things at will, and that caused its own set of problems, here and there. I don't like the idea of changing the direction of the river....It has its own set of problems that come with it. It might help this guy who lost some acreage to reroute the water away, but it ultimately, someplace else, will cause a problem....I think rivers should meander wherever they naturally go. (*Sweet Grass County Local Civic Leader*)

To the extent that we have state statutes that specify, we do have minimum standards for the flood plain by state law. One of those is public health and safety; you can't permit something if it is a public health and safety threat. (*Sweet Grass County Local Civic Leader*)

We're actually still working at it...but it's fairly good. We've got pretty good history on Rock Creek and not bad on the Clarks Fork, so it's not too bad. The Yellowstone—...they've been working on that, too....Yeah, I think it's mapped fairly good. (*Carbon County Local Civic Leader*)

A lot of the summer homes that I'm talking about are quite old. And they were built where we wouldn't allow it today, they are in flood plains. It was [done] at a point where nobody cared. There were no regulations, no statutes, no ordinances. It was your property, [and] you do what you want. (*Stillwater County Local Civic Leader*)

I think the flood plain is...expansive along the Yellowstone....We've got maps that would show that, and it's all elevation relative to high water mark that occurs over so many years back. I think we probably depend heavily on the state for that information, so we would have maps. (*Stillwater County Local Civic Leader*)

They discourage building in the flood plain. It has been years since I have seen any problems with flooding on the river. A lot is taken out for irrigation and that controls it somewhat as long as it doesn't get out of hand....That irrigation that runs the whole west side of Billings comes from here. (*Stillwater County Local Civic Leader*)

B. The Practical Limits of Flood Plain Regulations

A lot...is determined by our growth policies.....This county is traditional and conservative enough that a lot of people would oppose [a setback requirement]...for practical reasons....There's a lot of stretches...where they have their cabin between the road and the river...[so] you have to be relatively close to the river. (*Stillwater County Local Civic Leader*)

If you get flooded out and lose your home, why would you rebuild there? Because it only happens every 100 years? Can you get insurance? No. I do think that if you are going to take the risk, *you* should do it....As long as you handle your sewage properly, and you know that you can't get insurance, and the feds aren't going to have to bail you out, if you want to do it and it isn't hurting anybody else, you can do it and take the risk. That is what our country is built on—...people that were risk takers....Your home is your castle. You should be able to do that. (*Stillwater County Local Civic Leader*)

I would leave the river alone and let it do what it needs to do because, when you start changing different things in nature, you're going to lose something else. That's why we have the trees there; it's just the way it's supposed to be. That's my opinion. (*Sweet Grass County Local Civic Leader*)

C. Updated Maps Would be Helpful

I would like to see a lot better mapping on the Yellowstone River. Most of our maps are 1982 FEMA maps. Some of the Yellowstone has had some updating, and...that is helpful, but there needs to be some better mapping and better understanding of activities in the flood plain, and how to best undertake those, both from a safety issue and also trying to protect the resource. (*Sweet Grass County Local Civic Leader*)

Primarily, the problem is, [the maps] are so inaccurate. They are this blanket, 'Here is where we think it is.' I shouldn't say they are always inaccurate because sometimes we have information submitted in a site specific area and they are right on. They don't take into consideration differences in topography. When they were done it was based on information that was from 1982. They couldn't go every 200 yards down the river. Since then, there is a lot more information. They are useful, but they could be more useful by being more site-specific. (*Sweet Grass County Local Civic Leader*)

There needs to be better mapping and more compilation of the flood plain. With the flooding of '96 and '97, there is more information that wasn't there in 1982. More of a site-specific analysis....From the planning perspective...[we need] a better understanding of the hydrology, ecology, the geomorphology,...the safety features, irrigation facilities, bridges and abutments, a better understanding of the river and how the river changes, and the kind of things you need to anticipate. (*Sweet Grass County Local Civic Leader*)

D. Attention to Erosion and Changes on the River

In some places [erosion] is tremendous. It depends on the topography and it depends on the river....In some places erosion is a problem; in other places, because of the rocky bottom ground, not so much....Can I say it is a huge problem in the county? No, but it is a problem in certain, specific areas. (*Sweet Grass County Local Civic Leader*)

Big rocks, rip-rap, [stops] the erosion. It stops the soil from washing away. They are available. Today they ...have fork lifts and grapplers. The river doesn't get as high as it used to....The railroad is a big, huge dike that keeps it out of this side....[But] when it was flooding and running high, it would change its course. That hasn't happened in ten years. (*Stillwater County Local Civic Leader*)

If [erosion occurs] by a bridge or public facility, you have safety issues, issues with the health of the water, and sedimentation issues. What is the cause? Is it caused naturally or by some sort of use of the banks? If it is a use of the banks, is it something you can mitigate to some extent? If it is natural, you probably can't do much about it. You have to recognize the different factors. Some are man-made and some are naturally occurring. (*Sweet Grass County Local Civic Leader*)

I'm thinking about the irrigation head gates to the river right now. The river is always changing, and sometimes...[farmers], in order to protect their head gate and get the water they need for irrigation,...need to get into the river, so to speak, to [perhaps] clear a gravel bar up against their ditch. So, they need to be able to get out there and clear that away for irrigation. (*Stillwater County Local Civic Leader*)

Where they built the silversmith's, they raised it out of the flood plain. That would be a great spot to erode. There is a pretty sharp curve there. That is the only one I am aware of that was a problem. (*Stillwater County Local Civic Leader*)

I am not personally aware [of erosion problems]. The river fluctuates so much that it's bound to occur at times, but I'm not personally aware if we have it and where that might be....I suppose there would be a certain amount of erosion that could occur naturally...and that might be because the vegetation is not there. That could be due to several things. It could be that it's over utilized by a combination of livestock and wildlife. It could be because of the drought cycle we're in. Some of the plants that took a lot more precipitation aren't getting it so they die. It could be...[a] physical disturbance immediately along the riverbank....where it's private land. Today in this state, folks have

a lot of latitude of what they do. There are undoubtedly some controlling statutes there. (*Stillwater County Local Civic Leader*)

My grandfather [dealt with erosion] years ago....You can see the curve where the bank erosion was. There might be some abutment out there that they used to try and stop that. That is the only one that I am aware of. [They used] car bodies, lots of car bodies. Not anymore...because they are unsightly. You still see them in spots. There was a time that they thought the car bodies would cover up and fill up with silt and rocks and they didn't. (*Stillwater County Local Civic Leader*)

This bridge here just south of Columbus, it used to have a lot of rip-rap on it. And, four or five years ago, when we had the high water, it took that rip-rap away. And it was big rip-rap. And now, I'd say it's underneath that bridge someplace....That whole bank—it's just a small piece of private property—but that's going to just keep eroding away to the road. And that's a pretty important road....I think they have to have an aggressive rip-rap program. We've got infrastructure that needs to be protected....Let us get in there to protect [it]....[Let us] put some large rocks, rip-rap, in there to protect those things. Most ranchers cannot afford to rip-rap...and the river just eats away and takes away, but roads need to be protected. (*Stillwater County Local Civic Leader*)

I am saying where it is a man-made problem, it should be mitigated. For example, if erosion is occurring because the cattle are watering at the river, can you reroute the cattle. Is it that bad?...I don't think people should be told you absolutely cannot let your cattle go to the creek. That is ridiculous. That is the way most cattle are watered in the state. You have to look at the kinds of costs you impose on people when you require these types of things....You have to look at the cause of it. What are the remedies? Are the remedies worse? (*Sweet Grass County Local Civic Leader*)

Sometimes there is an embankment of some sort, whether it is rip-rap, or those barbs that go out into the river with the rock....Maybe the best thing would be to recognize that it is going to happen, and [that]....you can't fix every problem. Putting in some fake retaining wall or rip-rap may exacerbate it instead of fixing it. I am not advocating a specific solution. (*Sweet Grass County Local Civic Leader*)

[We have] a few subdivisions along the river. I guess I can only think of one in Stillwater County....You know, it's not easy to build along the river, because it moves all the time, so it can take your house away. (*Stillwater County Local Civic Leader*)

E. Alternatives to Rip-rap

You have to look for the spots that are a potential danger and you really have to do something to [keep the river] where it is now. That probably means some really big boulders going in, some rip-rap, but it shouldn't stop there. You have to support it behind there. Make sure there is good growth of trees. If that is all you are going to do, you have to look at it. Someone that really understands erosion needs to study it and make recommendations to the county or cities. (*Stillwater County Local Civic Leader*)

It's a free-flowing river, so no dams or anything. I'd have liked to have seen dams years ago....[but a dam] probably won't happen [now]....What I see should have been done on the Yellowstone is off-river storage. There was a couple different places around Laurel area, Park City area, that could have been used as a dam, and just use it as a high water [storage]....But you won't see any on-stream storage on the Yellowstone or the Clarks Fork, either one. The days of the dam are gone, I guess. (*Carbon County Local Civic Leader*)

Bendway weirs. They go into the upstream about a 45-degree angle maybe. You dig them in, and you run them back into the bank....When the high water comes, it flows over the top actually, and it pushes that stream [away from the bank]....[The weir] doesn't cause that scouring effect on the edge. Where, if you put rip-rap out on the edge of the bank, it tends to scour and get deeper and deeper next to the bank,...[the weirs are] much better than armoring. We've had experience with it—made a believer out of me. And these are high,...pretty fast-moving waters. Yeah, it's been used a lot over the years. I think a lot of people weren't really thinking they would work, but they do. They actually do work. If they're put in correctly, and you have a big enough rock, and they're dug in so they're in deep, and the angle is correct on them, [then] they sure do work....[And they are] cheaper than armoring....You only have to have them every 150 or 300 feet, whatever it might be. So you just build them and we put in three or four....The first year, high water actually ran over them, but they survived. It worked good; it worked just the way it's supposed to. You know, everything doesn't work the same everywhere, but a combination maybe—I was sure impressed with them. (*Carbon County Local Civic Leader*)

F. Timeliness of Permit Process is Questioned

Oh, the regulations....The hoops you have to jump through to get a permit to do anything....I wish [the Corps of Engineers] were more accessible....We have a perfect example....We're having a problem on Bridger Creek with some people not complying with...stream regulations, and took them a long time to pay attention. But now they are coming. It just seems like it takes a lot to get them. (*Sweet Grass County Local Civic Leader*)

I wish they would be more responsive when there was an emergency. We've had some rip-rap that's been washed out in two spots by the Grey Bear Fishing Access. We would like to have got it repaired before flood season. And we still haven't heard back on our permits....[The river] just washed out two pieces probably: one was probably about 15 feet long and the other one was probably 20 feet long. But there's a good chance with high water now it will probably all be gone....So it's one of those deals where we could have got to it right away when we found out it was...and part of that is our problem for not really looking at it close enough until we started thinking about high water. (*Sweet Grass County Local Civic Leader*)

Well, if you've violated the law, it doesn't take...[the Corps of Engineers] too long to get here. If you really need them for a permit, sometimes it takes forever. (*Sweet Grass County Local Civic Leader*)

V. A Common Sense Approach

A. Maintaining a Balance within the Community

What shakes out first is public health and safety. I would say you are balancing those other factors. Beyond public health and safety, I wouldn't give a number to any of the others. I am not suggesting that if an irrigation project required rip-rap [that you shouldn't do it].... You look at the pros and cons in any kind of planning [and] I think you are looking at a potential for impacts and how they can be mitigated, rather than a choice of either/or. It is a balancing act. (*Sweet Grass County Local Civic Leader*)

It should be a live and let live area...[to] make it easier. I would love to see more 'Park Here' signs instead of 'No Parking.' There is a fine line between doing it right and doing it too right. You [need to] get a feel for the community. (*Stillwater County Local Civic Leader*)

[People here are] still somewhat conservative in their mindset, but pretty independent people, good work ethic, a pleasant community [with] a lot of cooperation and participation, whether it is putting together a new library or the new hospital. There is a lot of interest into protecting our historical background, and our cultural resources, and [its] a balanced place to be from. I have lived here a long time. (*Sweet Grass County Local Civic Leader*)

To some extent, [with] any decisions made by any permitting agency or any board when dealing with planning, you weigh all those factors. You have to. Whether it is in the back of your mind or a particular line item issue, I think individuals...look at those factors and decide what to do or how to operate. That is a common sense approach. (*Sweet Grass County Local Civic Leader*)

We're a team that has to work together. We strive hard for consensus, but realize at the same time we won't always get that. I think we have enough respect for each other, and want to maintain a high level of trust among us to where we know that we have to....But, more often than not, we do get the consensus, because we value that. We try. Sometimes it may not happen. (*Stillwater County Local Civic Leader*)

I guess at one time we had some terrible thieves in the area, butchering cattle, stealing cattle and horses, and whatever they could get their hands on. So, we formed the Stillwater Protective Association. It meant nothing, didn't have by-laws, but we had the ability to paint signs, and all they said was 'Stillwater Protective Association.' Scared the holy jiminy out of the whole country because we'd put them on our gateposts [and] on our pickups. Anybody who would carry one. We had a series of meetings....[We] called the leader in each [individual] community, and said, 'Would you gather your neighbors, and make some cookies, we'll be at the house at seven o'clock, Tuesday?' [Then they asked,] 'What are you doing?'... 'Well, we want to look at the thievery in the county.' We had a 98 percent turnout in rural Stillwater County doing that. I called it, the Kitchen Table Deal. Kind-of another model. But, boy, those were productive meetings. They

looked after themselves because they knew the sheriff was getting old and he couldn't look after them. So, they looked after themselves, and the stealing went down to nothing. It really worked, but that was when we had those [individual] communities. (*Stillwater County Local Civic Leader*)

Irrigation in this county is a huge deal. From the county's perspective, we are trying to construct facilities that are safe for the river, in terms of fish habitat, etc., but [also] trying to protect the agriculture users. They are a huge part of this community. Some people say they don't care about Ag, they care about the 'viability of the river.' Once you get past the base minimum standards, those are local decisions. I think a locality can choose to be more protective....I understand that can be messy, but I can't think of anything that isn't [messy] when you are doing grassroots planning. You can't exist in a vacuum and say that it has no effect on anyone else. You can't say that with the Yellowstone. You can't have this over-arching 'we know what is best for you.' (*Sweet Grass County Local Civic Leader*)

I like to have all of the interested stakeholders work together and try and come up with something that they can walk away with something that is workable....I think every interested group out there needs to get educated about the other party's point of view....[and.] depending on any given situation, there may be one group that needs more education than the other or they need a better understanding of what the other's constraints are....DNRC did a study that showed that the lower part of the valley is much worse off than the flood irrigated areas because the aquifer didn't recharge....Conservation easements:...do they protect the land or not?...Is grazing beneficial or harmful? There are valid points on both sides....Out-of-state landowners [should know] what to expect coming into a community....[Give] education to recreationists about some of their bad habits, [like] not cooperating with landowners [and] recognizing that they have an impact on the resource, too. (*Sweet Grass County Local Civic Leader*)

The Stillwater Protective Association is a member of the larger group that—I don't know everything about that, but there's a lot of ranchers on that, there's a lot of ranchers that see them as an environmental group, and therefore bad, but there are a lot of ranchers on that, and I think it's kind of middle of the road. They see opportunities to conserve our natural resources, but not preserve them, not lock things up. I guess the Stillwater Protective Association is the group that has worked hard with the mine....They have what they call the Good Neighbor Agreement, which is a wonderful document, and it's been used in other parts of the country. [Other] mines have used it as a prototype. (*Stillwater County Local Civic Leader*)

The impact on the river....I think if Columbus can grow and they can use common sense with the growth that is one thing with the council. They grew up here and they all have common sense. (*Stillwater County Local Civic Leader*)

More than anything else I think...we live in a society that creates a lot of pressure and tension. People work 24/7, almost just to try and make ends meet, and they need a way to

get away. Right down here [at our park,]...all summer long, you will see people there come in just to get away and replenish the soul. I just feel as long as you set reasonable policies I think you can let people have access to even your smaller tributary areas that feed the Yellowstone. (*Stillwater County Local Civic Leader*)

I hate to see the environmentalists go to extremes on certain issues and that happens. (*Stillwater County Local Civic Leader*)

B. Addressing Subdivisions, Laws and Taxes

I think the city will continue to struggle with subdivision. Whether they should or shouldn't be allowed. We only have one zoning district outside of the city limits and it is voluntary. We are going to put our land into a zoning district and in this district you can't carve off less than 160 acres. By voluntary, I mean when they created that district that carved out anyone that didn't want to be part. County or city can come in and say we are going to zone. Outside of the city limits Sweet Grass County is un-zoned except for that one area. I think in ten years there may be more zoning, either private, although there has been more discussion if there would be interest in county zoning for a certain distance. I am not advocating or suggesting it is a bad or good idea. I am just saying that these are being discussed. I don't know that I know what I think of it yet. (*Sweet Grass County Local Civic Leader*)

You just have different policies in the county, in the state, in the city, and pass regulation that is for the best of the community, and then people will fill in around that, you know what I mean? It is a growth plan....The main concern would be in the county where ranches are being sold off and then people are coming in and buying up ranches and building on the land there, which I think is... a real sensitive area that needs to be really looked at for the long term of the county here....Once you have an area and it gets overpopulated, your road, your water, your police, your fire, your schools, everything is affected by people, population. And when you need to present more services, taxes go up. It's like a snowball going downhill and it's hard to stop. The more people you have, the more services you need, and then you wind up with more vehicles, and that process happens. We've all seen it happen in different areas in the United States over the past 100 years. Beautiful areas that all the sudden are still beautiful, but just over populated, where it's hard to go there anymore. (*Sweet Grass County Local Civic Leader*)

[After] I took office, in the southern part of the county, there were some ice build-ups and there were primarily summer homes, and they were concerned about flooding, so they called me, the new commissioner in their district, and said we've got this ice, come and help us out. It sounds like a reasonable request to me, [but] I'll have to ask and get back to you. I talked to our road and the other commissioners and, no, we can't do that. Really? Why? Well, three things. First, it's on private land and there's liability....Another one is the Fish and Game is responsible for the fish habitats [and] would have some problem if we took heavy equipment and messed around with the river. And the other thing [is]...an insurance company would look at this ice jam as a natural event, call it an act of God or something. So if we go in there with our equipment and undo that, we're

just pushing the problem downstream and then it's our fault; it isn't an act of God, it's an act of the County Commissioners. So, we just would like to help people, but we can't, and when we explain why, they accept that. (*Stillwater County Local Civic Leader*)

I think within ten years we will have a sales tax. People want no new taxes, period, and I don't want more taxes but I think that we've got two legs of a three-legged stool. A sales tax would provide that third leg...and property tax...It probably wouldn't be a case overnight, initially a sales tax and totally eliminate one of the others....and I think any state has a lot of tourism is foolish not to have it...but that requires an education. They have to see...you can't afford not to have a sales tax. (*Stillwater County Local Civic Leader*)

I don't think every piece of land should be subdivided, but yet, [with]... private property rights, there is a fine balance....I don't think you should be able to subdivide good resource land into small acres and have houses on it. I think there's some way you could work around that, maybe subdivide undesirable resource land and still accomplish the same thing. Like if a rancher needs to for financial reasons, to keep doing what he's doing, he should be allowed to do some of that, but I just think chopping up good resource land is not the right thing to do. (*Sweet Grass County Local Civic Leader*)

I do like our new subdivision regulations that we allow for people that might be in jeopardy of losing their ranch. It allows them to sell off some acreage. (*Sweet Grass County Local Civic Leader*)

And I guess I should clarify. I'm not for subdividing everything either, but I just believe that personal property rights are that person's. Whoever owns the land should be able to decide what to do with it. That's my opinion. (*Sweet Grass County Local Civic Leader*)

Because I just think people, maybe with the education, they won't build along the river. I just don't see...the Yellowstone [as being] like the Stillwater, where people can get right next to it....The Stillwater is pretty stable and doesn't change that much, but the Yellowstone does....Probably the State of Montana, maybe the Army Corps of Engineers, maybe the Fish Wildlife and Parks [should provide that education]. (*Stillwater County Local Civic Leader*)

VI. Evidence of Changing Local Values

A. Challenges to the Local Idea

As far as out-of-towners locking their places up and not allowing any access, do I like that? No, but I think it is their legal right to do it. (*Sweet Grass County Local Civic Leader*)

Look at Billings, for example. The Yellowstone River runs through there, and I can remember 35 to 40 years ago, when I was out there hunting....The town was about 15,000, 20,000 at the most, and now it's over 100,000 if you include all the suburbs. And

all of those thousands and thousands of acres that were providing...food—...nobody's worried about that because they think they can import it. But I guarantee, one little war would end that in a hurry. And they've taken this land...and put cement on it, for God's sakes. (*Sweet Grass County Local Civic Leader*)

The way the ranches go and the farmers go, there's not a lot of money in it. It'd be hard to see what this town would really look like if [the miners] didn't come in...ten or 12 years ago. Because with their money they brought homes...The mine gives a lot of money to the schools and different projects that go on here, and it's basically what made this community what it is today. The bonding of that industry and the ranch industry. (*Sweet Grass County Local Civic Leader*)

You read about the romance of the Old West, and that's why a lot of these rich people come...for the romance. Well, there's romance in an old family farm, too. Their romance [the rich people's] won't buy you breakfast. (*Sweet Grass County Local Civic Leader*)

What we have to remember is, the generation that really cared about the environment and really cares about protecting their places against the elements, is the generation that is dying-off. I call this [current] generation the convenience generation. They are going to do what they want because it is convenient to them. They do not care what it does to anybody else, or the environment, or anything. They could destroy a lot. They care about nothing. When you see the t-shirts that say 'It's all about me,' that is not much of a lie. That is so different from the generation that built this area and developed this area. The community spirit isn't here, like it used to be. It is in pockets, but not like it was. (*Stillwater County Local Civic Leader*)

My daughter and son-in-law live on a ranch west of town here, and it's not a very big place....A realtor just appraised it at a million and a half....It's out of the question entirely for the kids to buy it. My wife and I have spent all of these years in agriculture, and just like most of the neighbors, whenever you do make a profit, you put it back into something else. So we got a million and a half dollars sitting up there, and nothing to show for it....How are the kids going to make a payment and still be able to live there, too? And with an appraisal like that, the government won't let you give it away. You can't sell it for less than the appraisal...and [besides,] the last thing we want to do is sell the place. (*Sweet Grass County Local Civic Leader*)

We bought my husband's ranch from his father at, what was at that time, probably a hugely reduced amount. It was enough for them to retire...at that time. And we're doing the same on the next generation....We have to get it appraised, and we're going into the gifting...[with] a limited family partnership so that our son and my brother can buy our share out. And we'll be able to retire and have a little bit of an income. (*Sweet Grass County Local Civic Leader*)

My dad is at a point where he wants to retire, and there's not enough money off the income of the ranch to allow him to retire. I have two brothers that want to stay in

agriculture, so the only way we can do that is to sell the ranch here and...buy a bigger ranch somewhere else. (*Sweet Grass County Local Civic Leader*)

I just hope my family can get a chance to appreciate the river like I have, and get a chance to float it and fish it, and look at everything that I've seen. That's what I would like to see happen to the river....[But] I could [also] see big corporations buying up property along the river, and it not being agriculture anymore. (*Stillwater County Local Civic Leader*)

B. Newcomers

'Welcome to Culture-Shock-Big-Timber'Most of the counties in Montana have a code of the west. It is a document...[and] we have one being put together primarily by the Cottonwood Resource Council. It is a 'what-to-expect-when-you-buy-property-in-this-county' document. A number of counties have them. They are trying to educate people on what to expect, weather-wise, service-wise, [and] neighborly things. You had better know what your water rights are before you start taking it....Here is what to expect; here is how to behave yourself. (*Sweet Grass County Local Civic Leader*)

I think that, in some respects, local people have a greater appreciation for water. It is the life blood of an agricultural community. It is aesthetic for out-of-staters more than something they need for their livelihood....In general, they are looking at aesthetics and they are not doing a lot to protect the resource. They can say because we built our house back and we are going to clean up this irrigation dam that is better for the river. It isn't if you are still going to put a pond there and are going to put fish that will get into the river....The ranchers that don't have easements on the property are incredible stewards of the land because they depend on it for a living. And I think they get short-shifted and short recognition sometimes. (*Sweet Grass County Local Civic Leader*)

Newcomers immediately put up 'No Trespassing' signs, 'No Hunting' signs, 'No Fishing' signs, 'Stay Off My Property' signs. Maybe they have never had land this beautiful, and they want to not share with anyone. They come in, and don't know the country, and don't know where to build or buy. After they pack water for two years, they put the place up for sale. (*Stillwater County Local Civic Leader*)

Small tract owners....We have people who bought their 40 acres and don't have a clue what to do with it because they've lived in town all their life. So what do we end up with—a whole bunch of weeds. Don't allow anybody on it, 'This is mine. Let's not graze it, let's not do anything with it so the fireman will have something to look after.' That's really real out here. They don't allow any grazing or anything to use that tall grass that's out there waiting to burn. That's hard for me. We need to harvest things if we expect them to grow. I've watched an awful lot of pastures [and] when they're managed right, you get good strands of grass and a good ecosystem. And if you don't manage it, you've got a mess. And we have subdivisions that are a mess, although we've had a really active weed department, and they finally realized that there are other ways of controlling these weeds, biological, do little with livestock, spray the perimeters so we don't spread it over

the neighbors. If somebody is highly allergic, or their value system says I don't want anything to do with pesticides, far be it for us to suggest to use it. Let's give them a few bugs and they're tickled to death. We've got a real diversified sort of a weed management system, or we don't call it weed management, it's plant management. (*Stillwater County Local Civic Leader*)

I basically retired...and moved here. It was October...and I'm in my front room, the wind's howling, it's 31 degrees out, and I think I'm going to go crazy, so I went down to the IGA store and got a job there. So [now] I know everybody in town—just by sight, not by name, and I've worked there for three years....That was a good way to be introduced to the town, where everybody knows everybody....So I was accepted well here, and the town's changed from what I understand. It used to be a ranch/farm community, and I don't know when the mine came in...[but] I think there was a problem then....I think that took time for people to get used to...and now they have a lot of people retiring. There's a lot of people moving here from the south and east, and west. (*Sweet Grass County Local Civic Leader*)

C. *Empty Castles and Trophy Houses*

They don't subdivide it, they just come in. They buy it up. They don't put any cows on it, they just let it sit there, and build a great big trophy house on it, and...the land isn't really being used for agriculture any more, it's either someone's personal hunting grounds or river access, you know. So, for me, you've kept people from living on it, so that those [wealthy] people can come in and block everybody off it. It doesn't happen all the time. (*Sweet Grass County Local Civic Leader*)

We have some [newcomers] that have moved in and their house is right next to the river, and then they want no one else to build next to the river. You know, 'I've got my little piece of heaven, but I don't want anyone else to be able to do that.' (*Sweet Grass County Local Civic Leader*)

I expect more development to happen. People love it out in the hills. They're building new homes and have their piece of the rock and a castle. They love it here. We'll have changes in the infrastructure, more pavement, a stronger hospital system, not the kind that does all the surgery and stuff, but to bring people in and help them heal up after the folks in Billings have looked after them for a while. (*Stillwater County Local Civic Leader*)

I have a real concern, because mom and dad move up here and build a \$500,000 house. Do the kids want that? I talk to a guy that runs a landfill that buries tires the other day, and he had an interesting concept about this country. Way back when, the Spaniards and the French folks came over here and gathered up all our gold and silver and hauled it home. They were very rich so they built these huge castles. Now, many of them are empty. I equated that to our castles. What do they even do with them? They're trying to earn a living and raise their kids. How do you pay the taxes on these things? How do you keep the lights on? Do they really want them or are we going to end up with a bunch of places for retreats? It makes you wonder. They're beautiful, big homes, huge things,

million and a half, two million? And for us, that's a castle. Especially when most of us were raised in these little old farmhouses. Those things really ring my bell because I don't know where we're going and I guess I'm too old to really worry about it.

(Stillwater County Local Civic Leader)

I just feel development is probably our biggest worry. And [we need to] be careful of how we do our developing. I'm not so much worried about what the farmer or rancher has done over the years, because he's done pretty well taking care of things. That's his life. But...we've got some old subdivisions...on Rock Creek [that were built] in the '70s, and they're terrible. *(Carbon County Local Civic Leader)*

I had a lady...[who] bought into this subdivision, and they're from Chicago, and,...according to the subdivision rules, you have to fence yourself away from the road because it was open grazing,...but she called and said that the neighbor had his cows out there on the road. And I said that's the way it is there, open grazing, open range. I said 'You gotta fence your land. That's the way it is in the subdivision rules.' There was dead silence, and she said, 'Well, there will be poop on the road.' I said, 'Welcome to the west.' I didn't know what else to say. *(Carbon County Local Civic Leader)*

D. Concerns Regarding Conservation Easements

Some [conservation easements] say that the family can build one house. I mean, they limit how many dwellings there can be on the land. *(Sweet Grass County Local Civic Leader)*

[Conservation easements] pretty much stop any development. I don't agree with conservation easements because it takes away the power of the future generations to make a decision...for no further subdivision. Some of them expand on that to no further development of any kind, either gravel or mineral or oil or gas or timber or feedlots. It just goes on and on....[The people who set up conservation easements]...have moved in from somewhere else, most of them. *(Sweet Grass County Local Civic Leader)*

Most [conservation easements] are done for the wrong reason. They are done for tax perks....For [land worth] \$100 an acre, put a conservation easement on it, and all of a sudden, it's only worth \$50 an acre because it can't be subdivided. So they take that \$50 as a tax write-off....So they buy land at a...cheaper [cost] than what you or I could because we pay \$100 an acre....[For us,] it doesn't do any good,...because you're not in that high of a tax bracket where it's going to save you. *(Sweet Grass County Local Civic Leader)*

The proximity to the river is a huge factor in driving up land prices....We see more conservation easements. So, the river is certainly driving value for conservation easements. *(Sweet Grass County Local Civic Leader)*

There are a lot of old time ranchers who don't have any intention of changing their practices or selling, who may or may not have conservation easements on their

property....The out-of-state people are less likely to give access than local people. (*Sweet Grass County Local Civic Leader*)

E. One Comment on Coalbed Methane

One thing that we will have within the next ten years is coalbed methane development. That's coming, and, personally, it can be a good thing. It can be a good thing for the county tax base....We've heard a lot of horror stories about things that have happened in Wyoming...[but] we can learn from those mistakes.... One of my main concerns right now is that private land owners may not have enough say in the how the disturbed land is reclaimed....Also, water quality and quantity is the major issue there; that's the main concern. Now some will say you can take that water. When they're going after the gas that's in that coal, the gas comes up in the water, the gas bubbles up, they capture the gas, and then there's the water. They've got to do something with that. They either pump it back in the ground or give it to ranchers for livestock, and livestock can drink it, and probably you and I could drink a glass of it. It might taste a little strange, but it probably wouldn't hurt us. It might not even taste that bad, but if you poured it on your alfalfa, it would just kill it. There's things like that, and that's what a farmer or rancher doesn't want to contend with. So, I was going back because coalbed methane will be here in a big way within the next ten years. And, personally, I don't mind it....I could certainly live without that development. But, if it has to happen...if it's done reasonably...[it will be okay]. (*Stillwater County Local Civic Leader*)

VII. Valuing the Yellowstone River

A. The River Supports the Community

Probably the most important thing is that I'd like to see the Yellowstone River stay unpolluted and not over-taxed by people, and managed in a way where it can...be managed. It's doing well as far as I know now, but not overused or polluted. That's my main concern about it. (*Sweet Grass County Local Civic Leader*)

I like water. It's just part of the whole thing here. It's part of the thing that makes it a good place to live. You take the river away, it would be a much different place. That's what it [the river] means to me. I don't think it should be messed with. They should leave it alone—which they're not going to do. (*Sweet Grass County Local Civic Leader*)

First of all, it is magnificent. Second, it is support for ecology and the lifestyle. It is important for agriculture, and recreation, and certainly for fisheries, and obviously for a whole host of reasons that have to do with the environment and ecology. (*Sweet Grass County Local Civic Leader*)

Big Timber is quaint: no stop lights in the town, beautiful views and [it's] where the two rivers come together—the Boulder and the Yellowstone. It is wonderful during the summer and fall, and winters are questionable. (*Sweet Grass County Local Civic Leader*)

I have an appreciation for rivers everywhere, whether they're used in commerce or recreation, or in this instance here, irrigation is very important....Water is the lifeblood. Irrigation is big, recreation is big, and that's whether you're floating it in a raft or fishing it or taking pictures. (*Stillwater County Local Civic Leader*)

I live in the most beautiful part of the county.....Truly the prettiest part....The diversity, the natural beauty, the natural resources, the custom and culture of the people here....We're blessed with a lot of natural resources here. (*Stillwater County Local Civic Leader*)

It's very important, because I believe in irrigated agriculture. I believe in cattle ranching, and that has been our major source of water in the area, for irrigation purpose and also recreation. It's a big recreational stream, huge....Scenic beauty for one thing, and it is a fishable stream. It's a navigable stream when it comes to floating or rafting, or whatever they do best on it. I guess the Yellowstone is the closest recreational point for a heavily populated area. Billings has about 140,000 people in the surrounding area and a lot of them come here for weekend and evening use. It's close to town and they just come up and enjoy our wonderful mosquitoes and everything else that comes with a nice stream. (*Stillwater County Local Civic Leader*)

I like to hike along the Yellowstone, picnic along the Yellowstone, just observe it, drive many, many times to the bridge just to observe it during different times of the year. Like right now, it's at flood stage, which is phenomenal to watch. But other times of the year we can predict....We've been in about a five- to seven-year drought here, so we watch the river because some of the people have to stop using water right off the river when it drops to a certain level, to maintain fish water. So, it's a predictor of our weather. It's a predictor if our ranches can irrigate, it's a predictor of...I don't know...the things that happen from here all the way down, a weathervane in it's own way. (*Sweet Grass County Local Civic Leader*)

A lot of farmers and ranchers use irrigation water from it [the river]. Livestock drink from it. Basically, it's the center of the whole community....Everyone's kind of drawn to the river. (*Sweet Grass County Local Civic Leader*)

Yellowstone is a lot more public....Anything you do on Yellowstone is a major political thing....I think it's because it's...[a] national treasure....It's the longest free-flowing river in the United States, and you know that's always brought up anytime....It's just made public. (*Sweet Grass County Local Civic Leader*)

It is very important to the irrigation and the valley....It's right through the heart of Sweet Grass county. (*Sweet Grass County Local Civic Leader*)

There's gotten to be several fishing guides....Floating and fishing in the summer months has gotten to be big deal around here. (*Sweet Grass County Local Civic Leader*)

B. The River Supports Memories and Lifestyle

I just like to see the different turns in the river, the wildlife, the deer and the moose, haven't seen an elk, all the birds that live along the river. I like to see how the railroad has meshed along the river, because we'll be floating and every once in a while the train will go by and we'll wave and they'll honk at us. *(Stillwater County Local Civic Leader)*

This ranch has been in my wife's family forever. You know, when I go out there on the weekends and irrigate or build a fence, I'm irrigating out of a ditch that my wife's great grandfather built over a hundred years ago. Or I'm fixing fences that he put up over a hundred years ago, or a barn that he built over a hundred years ago. And they did things the hard way. I mean, when they first started, and this was long before they had electricity, they cut hay with a scythe. They didn't even have the horse-drawn type—that was later. When I start feeling sorry for myself, like I'm overwhelmed with all these things to do, if I think about that, it helps. They probably had more chores done before breakfast than I get done all day....I like the county. I'm here because I married [a woman] whose family had this neat ranch. That brought me to the area, but, of course, I've got quite a few friends here, and I like the area. *(Stillwater County Local Civic Leader)*

When you grew up back in the '40s and '50s, you found yourself almost always with family and friends picnicking on the Yellowstone or the Stillwater with family. You knew all your cousins. You got together and fried chicken and the kids played baseball in the pastures. It was a lot of fun. *(Stillwater County Local Civic Leader)*

I love to go and sit by the river...because it is relaxing. The birds, the water....snakes, which I don't like, but the wildlife, the deer, and the animals that the river supports. Just the fact that you can skip a rock across it or whatever. It is a relaxing place to be. *(Stillwater County Local Civic Leader)*

C. The River is Easily Taken for Granted

It wasn't just the beauty; it can be such an asset to the state. I think that is something that people really need to look at a little closer than they do. They ignore it and [the] taking care of it is ignored to a certain degree. *(Stillwater County Local Civic Leader)*

People need to be grateful for what they've got and do what you can to help preserve it. *(Stillwater County Local Civic Leader)*

Just the fact that it is there. Cities not far from us are on smaller rivers have rivers that have dried up. We take it for granted but it is always there. *(Stillwater County Local Civic Leader)*

The most important [thing] to me, aside from the river, is the well-being of the town, basically. There are so many factors with that. The economic well being....Keeping it going....We don't want the river to be polluted [but to] stay like it is...good for fish, picnicking....Just be there. (*Stillwater County Local Civic Leader*)

Laurel to Springdale: Recreational Interest Group Overview

Thirteen interviews were conducted with individuals who use the Yellowstone River for recreational purposes, including hunters, fishers, boaters, floaters, campers, hikers, bird watchers, rock hunters, photographers, and others who use the river for relaxation and serenity. Participants were recruited from referrals provided by members of the Resource Advisory Committee of the Yellowstone River Conservation District Council.

Participants were also identified and recruited by contacting various organizations such as Ducks Unlimited, Trout Unlimited, and the Audubon Society and by contacting local outfitting businesses.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|---|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Laurel to Springdale: Recreational Interest Group Analysis

I. *Valuing the Yellowstone River*

A. *The “Remarkable” Yellowstone River*

It’s a pretty remarkable river. With ten years of drought, you don’t hear of problems on the Yellowstone. It’s like an old survivor. It’s being well used now [and it] can continue very easily. (*Sweet Grass County Recreationalist*)

It’s a beautiful river, beautiful. It’s a beautiful river. The country around it,...the mountains....When I came back from [out-of-state] and I came around the corner, and the sun...was shining, and the mountains, and the river was flowing, and...it was like I gasped, and then I sighed. Home. (*Sweet Grass County Recreationalist*)

It is [important] for scenic purposes and for recreation. I use it for trapping, mushroom hunting, deer shed hunting, boating, fishing. It is great. It is nice to have a natural swimming hole next to you. (*Carbon County Recreationalist*)

First of all, [the Yellowstone River] is a link to our historical past and...our cultural heritage here in the west. And I’m very much personally oriented towards that concept,...the historical significance....We’re floating right down the same river that Captain Clark came down 200 years ago. I think that’s important in preserving our western cultural heritage. (*Stillwater County Recreationalist*)

I believe the Yellowstone River is an unusual river. For one thing, it’s an un-dammed river. It starts in Yellowstone National Park. It has much different terrain. At the start of it there’s a lake [and] the canyons, [then] the rich farmland and the beauty south of Livingston. Then we get into the prairie, and end up into North Dakota. It has a multitude of interests for a lot of people. It isn’t all the same. It’s a river of variation. And it’s a river that’s dangerous, but it’s peaceful, also. [It is good] to be around the river, to watch that body of water moving away, and to see it usually clear, except in the spring. It’s a treasure in itself. (*Carbon County Recreationalist*)

You get on this river and she will carve out a new experience every year. (*Stillwater County Recreationalist*)

Big and daunting....It is bigger than most people are used to, and it is not wader-friendly. That is different from most trout streams. (*Sweet Grass County Recreationalist*)

B. *The River as a Refuge*

It is the only place I gain my sanity when I need to, and I don't need a bunch of people on it. (*Carbon County Recreationalist*)

[The river is] relaxing to me, it is. That's how I get away. If I'm going to get away, that's where I go. (*Sweet Grass County Recreationalist*)

[The Yellowstone River] is why I came to Montana. I was 18, living in New Hampshire, and I saw the movie *Yellowstone Concerto*....It was kind of an informational movie with classical music....I bought a motorcycle that spring, learned how to ride it, and went 'home' [to Montana]. (*Sweet Grass County Recreationalist*)

The tranquility, the quietness,...actually knowing somebody [lives] over there and, yet, you can still [sit] on the bank and fish, and you don't *have* to see anybody. You won't see anybody. (*Carbon County Recreationalist*)

Even though you're flowing down a river valley that is pretty-much paralleled the entire way by a major interstate highway and a railroad,...it still provides an experience of solitude. The natural environment. That's what I try to convey, too, when I'm using the river commercially. I try to convey that experience to my clients. It's not just about going out and catching a bunch of fish, or whatever. It's seeing the eagle's nest, or seeing the eagles, or seeing the other wildlife, or just experiencing the outdoors and having conversation about the uses of the river, or [conversations about] the historical significance of the river as you float along. Those kind of things. (*Stillwater County Recreationalist*)

C. *Free-Flowing and Natural*

Leave it alone. Don't dam it....It will take care of itself. (*Sweet Grass County Recreationalist*)

The Yellowstone is, just....It's really cool that it doesn't have a big dam somewhere....It's free....You can see where it starts, and where it ends, and there's nothing stopping it. (*Sweet Grass County Recreationalist*)

I love it. I mean, I've used it my whole life. And I don't think it would be as grand if it wasn't the way it is....I think of this dam [idea], and think of what you would cover up. Think of the beautiful country you would cover up. I mean, for God's sakes. (*Sweet Grass County Recreationalist*)

Get an appreciation for it...[as] the longest un-dammed river on the continent of North America....And talk about the diverse interests: agriculture, and recreation, and things of that nature. (*Stillwater County Recreationalist*)

It's the longest free-flowing river in North America, and there's nothing else like it....It's a natural fishery...and it's scenic and it's just an amazing place. The length, the variety, and the types of fishing are unsurpassed anywhere. (*Sweet Grass County Recreationalist*)

It's a volume of water, clear, pristine. It's moving rapidly and it's always refreshing and there's never stagnant water. It's a live stream and it's full of energy....You can't say pure, but it is pretty close. (*Carbon County Recreationalist*)

It's just magic because it's an un-dammed river. They almost had a dam in at one point. I saw the map of where the water would have backed up—unbelievable. We'd have a huge lake, but a lake with the life of about 70 years. It would have soaked it in so fast. It's a remarkable river and if somebody wanted to, he could go float 700 miles and see everything from the sharp mountains to the plains below. (*Sweet Grass County Recreationalist*)

It's important to me [that the river is un-dammed]. I don't know how important it is to other people, but it's important to me. It's more natural. Tail-waters are regulated fisheries, and very fun to fish, but not quite natural. (*Sweet Grass County Recreationalist*)

D. The River's Resources

The unique thing about the Yellowstone is, in order to have a successful fishery, you need to have a ripple and a run and a flat. It is a series of things that happen to the river. When you rip-rap the river, you get a series of jagged turns, big holes, and no ripples, no runs, no flats....It makes everything deep, and it doesn't allow that river to flatten out and create the ripples and runs....From a fishing standpoint, you are much more successful in a ripple, run, or tail-out situation. (*Sweet Grass County Recreationalist*)

The fishing is more challenging on this stretch than anywhere else on the Yellowstone because you are...in a transition area. [Below] Laurel...there is more of a catfish, a sauger, a walleye-type of fishery. Above Columbus is trout fishing. So we are in a transition,...[and] our section is a more challenging area. To catch a lot of fish, you've got to know what you are doing. And that is what draws me to it. (*Carbon County Recreationalist*)

The first thing is, if the water get too low, and too hot in the summer time, [it] poses a real threat to the fish habitat and their survival....Water that's being taken out, or returned, creates a problem....From the recreation standpoint, ensuring that we have an adequate fishery [is important]....Trying to ensure that the water flow and water quality is maintained [is important]. (*Stillwater County Recreationalist*)

The river is where life begins for bugs, fish, and birds. You see pelicans come by in the spring. They are going to the Missouri. When fall comes, the teals show up. You know that weather is going to start changing because the teals are here. It is like reading a book. When the hatches start coming off....it is a prolific place. I can't say I ever get tired of it. Knowing that there are some huge fish in there....It is clean enough to grow fish like this.

Back east, they grow all of them in hatcheries. One of the greatest things is the Yellowstone has all wild fish. A lot of places, they don't get this. It is like going to a game reserve and shooting birds, versus getting your dog out and going hunting. There is no fascination with a refuge. (*Sweet Grass County Recreationalist*)

Probably the most important problem, or challenge, is...just trying to preserve the resource as we have it. I think, currently [the river] is...in a pretty good state....New growth and development are just a natural way that things develop, but hopefully we can do so responsibly and still preserve the use of the river and the resources....so we can [still] enjoy going down the river....Preserving the fishery is important to me...[and] floating down the river [when] you may not see another boat all day long. (*Stillwater County Recreationalist*)

I was on the growth policy task force, and it is a complicated issue. This is where those trophy homes come in. I believe someone has the right to build whatever kind of home they want. They have the property, and the money, and they are creating jobs for people. On the other hand, I think the river is a public domain, and it is in the interest of all the people to protect it, particularly the edges because people can't develop there. If you have no regulations, people could build their porch out halfway across the river. You have to regulate what is too close. (*Sweet Grass County Recreationalist*)

I think of the riparian zone is...out to the change of vegetation...[When you get to] dryland farming...[and] grasses....you are out of the riparian zone. The flood plain is in the corridor. Everything that has a different type of vegetation than the rest of the valley is the riparian zone. Water is affecting what will grow there even if it doesn't get water every year....It includes the flood plain in most places. There are odd places where it just flattens, and the flood plain officially goes out a half mile. I don't consider that all riparian. (*Sweet Grass County Recreationalist*)

My dad and I argue all the time. He's a religious man, and he says God gave us dominion over the earth. And I say, 'Dad, I know the Bible says that, but that doesn't mean we have the right to use it, and abuse it, any way we see fit.' (*Sweet Grass County Recreationalist*)

[One] invasive species...is a gold-eye. It tends to establish itself in lake-like places. It migrates to warmer water. They look like a piranha; they are an awful, little fish. I am sure they are very vicious. They are very competitive. (*Sweet Grass County Recreationalist*)

A lot of the fish spawn at the tributaries, and so the Yellowstone itself isn't a huge spawning area. You have to take all of this into consideration when you are putting restrictions on things. (*Carbon County Recreationalist*)

I enjoy, [the river]...from the standpoint as a fly fisherman....But, then, I also get paid as a professional guide, so I derive commercial interest from it as well. So I think I have a lot of the different interests that bring me to the river. (*Stillwater County Recreationalist*)

E. Dangers and High Water

It takes a lot of lives. There's an undertow, and they used to use old car parts and stuff for protecting banks, and you can get tangled and drown. (*Sweet Grass County Recreationalist*)

One thing about the river right now, it is fast, and it is dangerous. People get on it, and they don't know what they are doing. [There are a] bunch of undercurrents. It will take a boat quick. (*Carbon County Recreationalist*)

Usually, after high water, you have dangerous places on the water....A couple of years ago we had a big deal,...and a guy [with me] will never float again. He has floated his whole life....If someone had the resources, [it would be good] to go out on the first of July, and screen the river, and make sure there are no dangerous places. Fish and Game wardens are great about getting feedback to you,...[but with] a lot more people floating, [there is] a lot more potential for accidents. Two things happen. It is the big water and the waves that get them, or the water gets low and muddy, and they can't see. They will jump in the water, and they can't see. Head injuries are a big deal. I would say those are issues that you probably need to consider down the road. (*Sweet Grass County Recreationalist*)

II. Access Dilemmas: Demands, Limits and Controls

A. Increasing Uses and Overcrowding

I see definite overcrowding, I see Fish and Game having to make some adjustments in fish limits. They're going to have to make some sort of adjustments...with how many outfitters who come into an area....Something to kind of weed people out of that. (*Sweet Grass County Recreationalist*)

I think it's going to be used more and more....More recreation. Agriculture is always there with the irrigation and water use. There's more floaters, [and] there's more fisherman, all the time. It's not just the Yellowstone; it's everywhere. Montana is a big destination spot. You get a lot of people in here to fish it all the time. I don't think the use of it is going to change, it's just going to be more and more. (*Sweet Grass County Recreationalist*)

As far as the traffic, the traffic is multiplying every year times two. From a recreational standpoint, I would expect in ten years to see three to four times the traffic. There are already a lot of people using this resource. (*Sweet Grass County Recreationalist*)

[The Yellowstone River] is probably the main source of how we make our living....We run fly fishing expeditions. It also has attracted a lot of people to the community.... Probably 85 percent of my clients have moved here because of the fishing in the area. So, it's huge. (*Sweet Grass County Recreationalist*)

I honestly don't believe that...floating...and the fly fishing industry [have] as huge of an impact...as motorboat people. [Motorboat people] tend to be people that take [the fish]At the end of the day, if you have 20 fly fishing boats with two people in [each boat], you might come up with two fish that were injured and that were killed that day. (*Sweet Grass County Recreationalist*)

I have to say, it's really different now compared to when I was young....Probably over the last ten years, it has increased dramatically. Motorboat use has become huge. (*Sweet Grass County Recreationalist*)

After I retired and moved back here, there were so many floaters coming down that I kind of quit fishing the river....They come through your fish hole. (*Sweet Grass County Recreationalist*)

B. The Importance of Public Access Laws

I am not talking about condos, or a subdivision, but I can tell you right now that there are people flocking to this country. They are spending everything they have to buy Montana. They can't own the rivers. They will get lawyers, and try to own the rivers, but they can't. The stream access is what separates us from others. (*Sweet Grass County Recreationalist*)

See, the river has changed over the last couple of years....[If some parcel of land] is on your deed, and the river has moved,...[it may be public now]. There are some BLM islands [that,]...20 years ago,...were ours. Now you have to really watch yourself. (*Carbon County Recreationalist*)

That's something that's pretty special about Montana—the streams access—compared to other states. If somebody has to go fishing, it's a pretty easy thing for them to do on the Yellowstone. (*Sweet Grass County Recreationalist*)

Montana has just great stream access, and I think that's really something...[I] fervently hope we preserve. (*Stillwater County Recreationalist*)

The stream access law...ruffled a lot of peoples' feathers. I think it is still right. We should all be allowed to use the river. (*Carbon County Recreationalist*)

The other thing that's very important...is this Montana Stream Access....People that come here for the fishing experience, in particular, are used to much more restrictive fishing experiences. So I explain to them the fact that...Fish, Wildlife and Parks has great programs, and access sites that allow you to get to the river, [and]...that once you're there on the river, legally, then you have the right and freedom to maneuver around the river up to the high-water marks unabated. That's a lot different than a lot of states, and that's pretty significant, I think. (*Stillwater County Recreationalist*)

The average high water mark is where the determination has been made that private land stops and flood plains begin. They mapped this all out in the past five years. What is the flood plain? It changes annually,...so the high water mark is a negotiable item. It changes from year to year. So, they did map it out, and there was some clarity. It isn't the 100 year flood or 500 year flood: it is the average from all the years. Basically, you can see where the high water mark is when you are fishing because of the logs and debris that came down in high water have deposited in a place where you can see. (*Sweet Grass County Recreationalist*)

You can go up and down the stream, anywhere you want. And you do not own the water in the State of Montana....We took some folks fishing, and...the next day I got a phone call, 'I know [your clients] got some fish, and I'd like to know where they caught their fish....I also want you guides to know that when you float through this water that doesn't mean they can stop and catch my fish.' Now, this was on an answering machine, thank heavens, because, ...whew, you know. My guides knew where those fish were before [that caller] even knew where Big Timber, Montana was....[That caller] came here, and floated with us through everybody else's property, and caught fish on everybody else's property, but now....You have to, you know, gently work in some awareness. (*Sweet Grass County Recreationalist*)

The Yellowstone is important because it binds us as a community. It is public water. The biggest thing that binds people in this country are the public lands. None of the politicians talk about it, or if they do it is casually. It is not tops on the priority list, [but] I think...what makes our country and Montana, unique, is the fact that, so far, this is not the rich-boy club. Even the millionaires...have to drink the bitter beer if the guy walking through their place gained access legally. It gives access for the common people. (*Sweet Grass County Recreationalist*)

I can think of a situation where a guy across the river bought a place for fishing. He bought a couple miles of it. The guy on the other side of the river was letting whoever wanted to come and go fishing. [The new owner] didn't like that, so he got a buddy to come in and buy the land on the other side of the river. So now, you can't access the river from either side. A lot of that's happening. (*Sweet Grass County Recreationalist*)

You know there's the fine line. Say I'm an outfitter that has a hundred days in the National Forest....I can sell [those days] as use in the National Forest. How do you do that when that's a National Forest?...You're making a living off of national [resources]. People who have a permit in the National Forest...can charge huge amounts of money. (*Sweet Grass County Recreationalist*)

The tributaries, the backwaters, the swamp, the sloughs. Nobody has rights to those, as far as I am concerned....Those are sensitive areas. Riparian areas shouldn't be treaded-up....[Those are] nesting habitat. (*Carbon County Recreationalist*)

C. Problems with Access

Every time you improve [a public access site], it invites more and more users, and, sometimes, it causes more problems than good. You get erosion, particularly when people start to slide their boats into the water, digging into the bank....You can see it is beaten up. I don't launch boats down there anymore. (*Sweet Grass County Recreationalist*)

Access is a big deal on the Yellowstone. There are sections of this river that you can't get on without camping overnight. Access can be 20-some or 30 miles between access points. With jet boats, it is not a problem; they can just zip, zip. Nothing against the jet boaters, but that upper area is so much more eroded due to jet boat traffic. (*Stillwater County Recreationalist*)

You can see huge, orange-painted signs, meaning 'Stay off. Private property.' And the thing is that is coming about. It is not the local people that are doing this. It is the people from out-of-state who are buying these parcels. [They] want that little island as their own, even though they can't access it, and they can't use it for agriculture. They just don't want anybody there. But, from an agriculture standpoint, when they show up to your house to go hunting, they expect you to allow them to do whatever they like. That is the problem with out-of-staters. They want it all for themselves and not let anybody use it. (*Carbon County Recreationalist*)

The Californian [said], 'We got out of there because of all the politics, and all that.' And the first thing they do is they go to your river board meeting, and they say, 'This is how we did it in California.' That is the first thing out of their mouths. Well, that isn't the way we do it. And the thing is, now, they are getting into the public offices where they can actually change things to make it their way. The locals sit by and just....I mean, it is our own fault. We are just sitting by, letting them do it....The town of Red Lodge is an example. [Newcomers] don't want any new infrastructure, or new businesses, or anything like that in Red Lodge, because they moved there because of the 'little tourist town' that they have. Locals need the money to stay alive, [but the new people already] have their money. (*Carbon County Recreationalist*)

I think they've done a good job of developing access sites. We're always trying to get more, just trying to ease the pressure, and spread it out a little more. We're trying to get some more down in this area from Columbus to Park City, and we're working with Fish Wildlife and Parks to hopefully do that in the future. (*Stillwater County Recreationalist*)

D. Decorum: Respecting Others and the Resources

People are usually pretty congenial at the take out. I don't know...you just have to have some etiquette. You have to come from parents that taught you to give a shit. (*Sweet Grass County Recreationalist*)

There's some conflicts sometimes, but I think, as a general rule, they work fairly well together. I think, as a general rule, it's a pretty good group to have on the river. There's pretty good watch-dogs all the way around....[If someone is] dumping something in the river that shouldn't be there, we're probably the first ones to see it.... At the end of the day, you have to make everybody compatible, and everybody might have to give a little bit. It is a multi-use thing. (*Sweet Grass County Recreationalist*)

All in all, the garbage, the campgrounds, everything is pretty neat and tidy....When I was a kid, I saw tires burning along the shore, beer cans. Oh, yeah, it is a lot more clean than it was 30 years ago. (*Carbon County Recreationalist*)

An unspoken [rule is,] if we're out there floating, and somebody's fishing, we try to go on around them. We cut them slack, and not whoop and holler, and jump in the river. We wave at each other as we're going by....It's been that way here for a long time....We're usually all pretty courteous. (*Sweet Grass County Recreationalist*)

One of the things we do is we are strictly 'catch and release.' [And,]...in the summertime, when the water is hot, we are done fishing at noon. If the temperature is at a certain point,...you catch fish, and [even if] you put them back, they die. So we don't do that....That was something that took us probably two years to figure out....[Now] that we are 'catch and release' only...we do not impact the fishery. (*Sweet Grass County Recreationalist*)

I have given this overcrowding thing a lot of thought. Generally, on weekends, I don't do guiding. If I have to, I get out early, and get in early. Everyone goes out on the weekend to get away, and they take their dogs. When I first came here, the Yellowstone wasn't really used. Now there are people camping out. People need to take care of their waste. That is another issue. The one thing is, they have put potties in at access [sites], but how do you deal with it on an island? I don't know. There will be a lot more people camping out on that river. That is what I see in ten years. (*Sweet Grass County Recreationalist*)

E. Systems of Control

We don't have to be so greedy. Put some self-limits. We have to start thinking as stewards, not as businessmen. (*Stillwater County Recreationalist*)

You know how Montanans *love* regulation. My hope is [that] it will always self-level. It will get so crowded out there that people will take up golf, or take up something else because it is no longer enjoyable. (*Stillwater County Recreationalist*)

First of all, [think of the river] as a resource for a fishery, not just as a business. Unfortunately, in the past, the forest service has tied their businesses to the resources, and said, 'Without the business, the resource would be nothing.' I think the opposite—without the resource, your business would be nothing. That means protecting your resource. At times, they have shut down the river because it has been too warm for

fishing. I think that is a good idea, and they maintain the fishery to some degree. (*Sweet Grass County Recreationalist*)

A lot of these people, potentially, will be building houses on the river. I teach them about the ecosystem, the economy, the effects that various things have on it, and the perspectives of the people that live here. I try to give them a lot of information in a gentle way....I use examples while we are going down, both pro and con. Like, 'See how nice that one blends in and is back away?' And, 'I can't believe someone would build right there in the flood plain. I would bet they get wiped out. I bet they can't even get insurance.' This one, down the bend here, it has two big picture windows, and as we go along I always comment, 'People with glass houses shouldn't build next to the river.' I think that gives them the subtle idea that maybe people would be throwing stones at those. (*Sweet Grass County Recreationalist*)

It would be really nice if people would regulate themselves, but they just don't do that....I'm really not big on government getting hugely involved in things....Well, I definitely go for regulation, but there'd have to be some forethought. (*Sweet Grass County Recreationalist*)

All I know [is] I want [to] get these stupid, big boats off the water....The way it used to be, the people you would see on the river were fishermen, not just people running up and down the river. Now we have the jet skis on there, which I am seeing more and more up in my little turf....Twenty-five years ago...you never heard the sound of the jet boat, and, now, everybody seems to have a jet boat....Certain times of the year, there should be restrictions...[especially in] places where the [water] is real, real low. (*Carbon County Recreationalist*)

I've wrestled with how can you tell people you can go make a living on the river and fly fish, but you can't bring your motorboat....I don't want to...categorize people, but...there's just something [about] the quiet and the stillness, and just floating and seeing the birds....When you're floating in the drift boat, it's a completely different experience....But I don't know how you deal with that. (*Sweet Grass County Recreationalist*)

It needs to be protected from overuse by the boaters....Maybe they're getting it now, but an outfitter can come in from Gallatin, or anywhere, and float the river. And you're down there fishing along the stream, and you're not the boater, and it's kind of disturbing to see so many boats, one right after the other, coming down....The use of the river by boats gets a little out of control. (*Carbon County Recreationalist*)

I have a real struggle with the summertime overcrowding,...and it's sort of an outfitter issue. When you're an outfitter, and you have a certain area that you use, and the [water gets low in the] area that you're working out of,...then you, all of the sudden, pack up 40 boats and take them some place else, which has happened the last few years. That's been kind of hard for me to digest....Bozeman has become so overcrowded...[with] outfitters putting out 20 guides a day....[Then] one guide decides to come down here and go

fishing, and catches good fish, and goes and tells everybody....And there's really no control over that....I don't really like a lot of control, so how do you tell them they can't? (*Sweet Grass County Recreationalist*)

I think there has to be self-regulation, too. We have outfitters that are putting out 30 to 40 guides a day. That is a bit of an over-use by any one person. I would like to spread them all over the state. (*Stillwater County Recreationalist*)

I guess it would depend on who manages that river. If they're going to send somebody in from out-of-state, somebody from Washington, D.C., I don't look for the river to stay the same....I don't want to see somebody from Washington, D.C., or someplace, coming and telling me what to do with our river. I think the government gets involved in too many things that they should stay out of, and our river is one of them. I think it should be left for people to use. I find anytime that they start getting into that kind of stuff, they start closing it off, just like our forest service. (*Sweet Grass County Recreationalist*)

We have our Montana Fish, Wildlife, and Parks that pretty much controls what is happening up and down the river recreation-wise. I imagine they will keep that control. (*Sweet Grass County Recreationalist*)

The hunting can be dramatically regulated for safety reasons. I would go with anything that the Fish and Game and safety people felt was important. As much as I like to be able to hunt, it takes a second seat because of the potential for injury. (*Sweet Grass County Recreationalist*)

You have to put in for a lottery to float down the Smith River. I am not convinced that is a great system. I think it is better to limit than to allow something to be so overused that no one gets the value out of it. A quota system is something I can accept, [but] I don't really like financially-based regulating....It is supposed to be for all the people, not just for those who can afford it. (*Sweet Grass County Recreationalist*)

I definitely like the 'no-motorized' [idea]. Nobody likes to see a jet boat go by when they're fishing. (*Sweet Grass County Recreationalist*)

We need a use-permit for the Yellowstone and the money should go to rehab [the problems that we create]. (*Carbon County Recreationalist*)

[What if] a bunch of 16 year-olds want to go inner tube the river? They have to have a five-dollar fee to inner tube the river? No. That is there for everybody to use. (*Carbon County Recreationalist*)

III. Shifting Scenery: Development Along the Riverbanks

A. Homes on the Riverbank

Everybody wants a little piece of land on the river, and then they build right on the river, which kind of sucks....You go up by Livingston, and you see the houses. I mean, house, after house, after house, after house, built right on the river. (*Sweet Grass County Recreationalist*)

What is unique about the Yellowstone is everything is undeveloped. When you float, you only see a handful of houses. That is the most unique thing. It flows through all this beautiful agricultural land, and the ranchers are satisfied with being ranchers. [But] the millionaires show up and want a house right on the river. It is a slap in the face to humanity. It is happening all over. You can't legislate aesthetics. Maybe that is true, but without aesthetics, you are fishing in someone's front yard. On the Stillwater, you are fishing in someone's front yard all the way down. It is a development dynamic that hasn't taken place [on the Yellowstone]. (*Sweet Grass County Recreationalist*)

I continue to see people moving in here, buying property....I think there will be some chunking up....[This] is a subdivision that has a common lot on the Yellowstone, and then there's [a subdivision] right next to it that just started, and then there's [a subdivision] up from [the second]. It was a family ranch that sold, and now the guy's putting 85 houses in there....And one thing cool about it [is] there's a nice common ground on the river that they're not building on, so that's nice. They're building back from the river. (*Sweet Grass County Recreationalist*)

In ten years, I think [this area] will be fairly similar to the way it is today with a ten percent increase in the trophy homes....Where I live, they are building a trophy home. Not me personally. I think [the construction of trophy homes] has created a lot of jobs for the community, so a lot of people will say this is great. It is allowing us to stay here and make a living, but there are a lot of people that resent it. (*Sweet Grass County Recreationalist*)

Probably the biggest thing that has hurt the river is people wanting to build too close to it. You have to keep them out of the flood plain, that's for sure. The law kind of states that, but some will go anyway....You don't want to mark people too far back, [but] you have to have some rules to say, 'OK, there's a boundary that you need to respect.' (*Carbon County Recreationalist*)

We're seeing transition demographics....Between here and Big Timber,...what do you see? You see agricultural property along the river, hay meadows, and so forth. Those people that are the farmers and ranchers, as they get older, there's a shift, you know. Kids aren't staying on the farms and ranches, they're going to college, or they're moving to the cities to get jobs. The people on the farms and ranches are, at some point, going to retire or whatever. I guess, what I'm saying is, that I think it's just a matter of time before there [will] be some sort of significant development that's going to take place in terms of

commercial development on the river. Now, that's not necessarily all bad, and it's going to have to be done properly, with an eye towards insuring that we don't have any adverse impact....But I think that we can reasonably expect within ten years that there's going to be some piece of agricultural property that's going to get sold off and developed,...whether it's tract homes, or subdivision, or whether it's a resort of some sort. I wouldn't be at all surprised. (*Stillwater County Recreationalist*)

Even in-state folks [are] buying along the river....It's a more prestigious piece of land. (*Sweet Grass County Recreationalist*)

Housing divisions along the river [are a problem]. Housing is too close,...[and], the thing is, it is going to multiply twice as fast as it is right now. [Where] there are ten houses, there will be 30. It is going to multiply....There are houses everywhere. (*Carbon County Recreationalist*)

[Housing along the banks] affects wildlife, it affects the river banks, it affects the beauty....There is a place up the Boulder, bought by two guys from New York, nicest guys in the world. Right on the bank of the river. You know, little stairs out...and, gosh, I suppose if I had enough money, I might want to do that, but I think I'd build back....I think, maybe, look ahead. (*Sweet Grass County Recreationalist*)

It's people with lots of money coming in,...and [some are] pushing this planning so that the guy down the road that has a ranch [can] break a chunk off [for himself] so that he can stay on his place for the rest of his life, and give [what's left] to his kids. (*Sweet Grass County Recreationalist*)

Recreationalists aren't really happy seeing a house right above them, or a row of houses, and looking on their back decks and patios as they are recreating. And people sitting on their back decks watching the river, or watching people recreate don't always appreciate...people who are having fun [and getting] loud....It is a great little view, but everyone is in view. And people that buy on rivers have to realize that...there are more people recreating. (*Stillwater County Recreationalist*)

Anglers [are bothered by the houses] a little bit. Floaters...are bothered the most. The anglers seem like they are here for fish and don't have time to look at the scenery. (*Sweet Grass County Recreationalist*)

I can't say that this is the prettiest stretch in the area. If you want beauty and pretty, go up to Yellowstone Park, Gardiner, stuff like that. Here,...you see 50 houses next to [the river]. As far as I'm concerned, it is not that pretty. (*Carbon County Recreationalist*)

B. Housing Developments Threaten Water Quality

They shouldn't build on the banks of the river. Their septic systems can contaminate the river. (*Sweet Grass County Recreationalist*)

You go down the Stillwater and they have sewer problems like crazy because the sanitarian let them build too close to the river. There is no way it can not violate the water table. It has happened several times with this community [because] the sanitarian, who got fired over there...came over here. They allow people to build right on the river, and they allow them to pump their sewage up the hill so they can pass a perk test. That is not in the interest of the community or the resource....I think it [comes down to], basically, how well you know the sanitarian. I know he is congenial with some, and not so much with others. As far as septic law is concerned,...I know you have to have your septic system 100 or 150 yards away from your well. Other than that, it is where [the sanitarian] determines you can get perked. It is really a gray area. It is violating the water table on the Stillwater. Every time we allow someone to build on the flood plain, it is a public liability, from a water quality standpoint, from an erosion standpoint, and a liability for FEMA when the sanitarian allowed that to happen. (*Sweet Grass County Recreationalist*)

The longevity of the Yellowstone and making sure of our water quality [are both important]....I honestly think we could make it better. We have irrigation upon irrigation, [and] that...water is coming out and going back in. You should have to send water from a field that is maybe not as clean, [and]...run it through a panel, or something, to clean it up. I don't know the solution. I am not a scientist, and I don't want to make it hard on the Ag community. Sometimes they put garbage water back in there after taking palatable water out. The wild fisheries in the states are evaporating. Colorado has had whirling disease so bad that a lot of their natural fisheries had to be helped by the state. I would say, when I am dead and gone, that river is going to be rolling like it is today. (*Sweet Grass County Recreationalist*)

C. Inadequate Weed Management

In Paradise Valley, there's a lot of out-of-state homes with a lot of weeds on them. Maybe people don't even know about, or aren't here enough to take care of [them]. And that keeps spreading the problem, especially on the river corridor. If somebody upstream has weeds, you're always going to have them. It is a problem. [The spraying program] is a ten-year program, so if somebody's willing to stick with it for eight to ten years, and in combination with some of the biological beetles, and everything else, you can stop it.... It takes everybody doing it, not just a few people. (*Sweet Grass County Recreationalist*)

If you don't have livestock, weeds tend to be a problem. People don't want livestock on their parcel of the river, but they won't spray it. See, it is a catch-22 situation. At least if you have livestock in there, they knock it down, and the seeds won't go everywhere. The Yellowstone has a tremendous area of leafy spurge, and it is just growing rampant, and we can't stop it....Education is the main thing. They don't know....[With] the smaller parcel [the weeds are] not getting them in the pocketbook like it would the rancher. They come into the state and say, 'Look at the pretty purple flowers.' (*Carbon County Recreationalist*)

It's the wrong kind of people that are buying the land around us....I mean, the guy comes out and says, 'Get off my land.' Well, [I said,] 'I'm on the stream access.' [He said,] 'It

doesn't make a difference. I own this piece of property.' They are going to make you move, and I don't have the money to fight. I mean, I'm thinking of several different ranches the guy bought just...because he wanted that stretch of river. He isn't going to want anybody even on his high watermark. (*Carbon County Recreationalist*)

D. Setbacks: Benefits and Impediments

They are building now right in the high water areas....I even see it where they are letting people build on the flood plains. They are permitting them....There should be a map set up [to designate] where you can and cannot build. Or within so many yards. It affects us all as far as insurance, higher rates. I mean, the people that live here know what the river can do, but the people that can afford these places are building right next to the river because they want the pristine beauty of living on the river. (*Carbon County Recreationalist*)

A few years ago, they were doing a master plan. I recommended that they take half of the setback of a Wild and Scenic River, which is 300 feet. [I was] thinking we could find some compromise. In one weekend, the commissioners flushed half of what the community recommended down the toilet. I don't think you can find anything in the master plan that says anything about a setback. We had some... 'Don't tell me what to do with my property' attitudes. I sympathize with that idea, but when your actions influence someone downstream....Look, if you were to punch a well in down here, and somebody uphill punches one, and all of the sudden your well is gone. He doesn't know it, but he is impacting what you had....Basically what the county commissioners represent are the agriculture people. Some of them do belong to NPRC, and are standup people as far as water quality and doing things right, others are, 'Do whatever you want.' (*Sweet Grass County Recreationalist*)

We have so much recreational use of the river now, and the floating, and what not. People from a big city, or populated area, they like to float down the river and see nothing but trees and wildlife....These big, fancy homes along the river, to them it is disturbing. To me, I just think they're crazy. A million-dollar home for three weeks of the year....It's a changing world. So I think we have to protect the river from encroachment from housing. (*Carbon County Recreationalist*)

I worry about some of the houses and things right on the river....One of the things I hate is the big RV park in the middle of Paradise Valley right on the river. Supposedly, they have services, [but]...I'd like to make sure they're not polluting the river. There's been problems with places in California where rivers basically die because of the number of septic systems near the river. Pumping that many nutrients into the river [leads to] high, high algae growth, and it will kill all your bug life. So, it's definitely a concern. (*Sweet Grass County Recreationalist*)

The Wild and Scenic Act, where I was familiar with it was in Washington state, gives you a certain buffer zone where you can't build next to the river, no subdivisions, no new

[buildings]....If you have an existing foundation, or existing cabin, you could use that, but no new stuff....I don't know the exact distances. (*Carbon County Recreationalist*)

I would rather see [setbacks of] 500 feet....There was a guy down-river that had his whole house go into the river....You shouldn't build that close to the river. That is where the setback comes in. If it is back far enough, and the river does change, it has room to change. Instead of saying, 'The river is going to take away my house,...[so] I am going to change the river.' (*Sweet Grass County Recreationalist*)

Along every river, there are people right there. So there has got to be an understanding that if you are going to live *on* the river, you have to live *with* the river. A setback is nice. They have done that on several waters. (*Stillwater County Recreationalist*)

I think that if you leave people alone, without rules, the corridor will change...because this is where they want to build. They want to change it, to cut the trees down [so they can] see the water, but the trees help armor the shore. It's just a multitude of things. (*Carbon County Recreationalist*)

IV. Ideas About Erosion and Rip-rap

A. Erosion is Not Necessarily a Problem

There's definitely erosion....I can't say if that's just the natural flow of things, [or] if there is certain things that people have done to the river that have caused those sort of things. There's been huge changes....Some people moved in from California, and they wanted the stream to run a certain way so they could build this little pond. They flat-out moved the county road—the county road. And then there was a huge flood up there, and people are going to...get sued because...[some think the flooding] happened because these people changed the flow of the river....I'm of the mind that natural things do natural things, and that's what happens when you get lots of water. If you're not intelligent enough to know that a river has a mind of its own, and you build too close to the river, those things can happen. (*Sweet Grass County Recreationalist*)

I've seen the devastation that took place south of Livingston on the Yellowstone because [the river] got behind the rip-rap, and then it took acres and acres away. And, to me, it took a lot of the beauty....[The river] takes a long time to heal, but it will. A free-flowing stream is one thing, but...there's no more erosive practice than nature itself. And if you want to see [a free-flowing river], and you're not interfering with private property, that's okay, but I think we still need to help people protect their property from over-extension of the river. (*Carbon County Recreationalist*)

I don't see that the erosion itself is a huge problem, unless you are a farmer that is losing ground, which is big. I don't think there is much fighting [erosion]. I think rip-rap is a mistake. I think rip-rap is almost an arrogant way that man tries to control a force much bigger than himself. (*Sweet Grass County Recreationalist*)

It's a real fine balance, in my opinion. I have the utmost respect for other interests....I know we have to work together. So I think that's why it's important that we do strike a balance in terms of some of the things people are looking at. For example, putting the rip-rap on the banks...may prevent erosion of their property and their interests, but, if its not done properly, it could have some sort of adverse impact on the fishery, which concerns me. And then it takes away from that pristine environment....I like the fact that,...in this section [of the river, in] very few places do you see any man-made changes to the river. It meanders, it's pretty natural, and, as you can see [today], it's really roaring....When it starts to lower itself down, some new side channels will [form], there'll be new obstructions,...new fish habitat, and so on. (*Stillwater County Recreationalist*)

In '97 to '98, [flooding] changed the Yellowstone River in a lot of places....Pools I used to fish in are not there. The islands I used to mushroom, are not there....[One] man wanted to armor it, and they wouldn't let him, and then when this big flood hit...I don't know how many acres it devoured at that one man's place. (*Carbon County Recreationalist*)

To try and tame a big river to not erode is silly....[You might use] hay bales, straw bales, plants to catch the sediment....Straw bales are a temporary fix to keep the sediments. Replanting has the long term effect. (*Sweet Grass County Recreationalist*)

The Spring Creek's are part of a public thing. They're a private fishery, but their value to the Yellowstone is very big, too. I use them a lot, too. So, I have personal interests in there. I think they should be protected, but they were affected by old rip-rap and armoring of the bank in the past, so where do you draw the line?...They're all valuable to the local economy and valuable to the river system. Eighty percent of the rainbows are within ten miles of...Spring Creek....It's where all the fish go. They're very valuable and should be protected, but I don't know where to draw the line. (*Sweet Grass County Recreationalist*)

B. Rip-rap and Its Effects

I don't think rip-rap is a good thing. But it's not a bad thing either, most of the time. (*Sweet Grass County Recreationalist*)

I'm not going to say I'm against rip-rap, but it should be judged and approached carefully. There's one place in Paradise Valley where I thought they rip-rapped a fairly stable bank, and the bank immediately below there now is kind of in trouble, and I think you really have to be careful where you rip-rap, and why. Be careful....[If] the next bank down starts eroding and you rip-rap that one, soon you have a big, armored channel. You can take a look right through Livingston—that's all armored, and the speed of the river right through Livingston is very fast, especially now at flood stage, but it's very fast compared to the other sections of the river. (*Sweet Grass County Recreationalist*)

I'm of the belief that proper rip-rapping is good; it armors it. You have to be careful whenever you work with the water that what you do here does not send it over...there. The river has its own means of equalizing....But if we wait for nature to take its other

way, people lose too much land....One thing, you don't want to re-channel it. You just try to stop it from taking more land....With rip-rap, you have to place them, you have to work on it, you have to bed them down, then it becomes a reasonable armor. It can mess up [if not done properly]. We have a lot of scientific data on the rip-rap....Natural is great, but I don't see very many women looking natural....Just a little touch, here and there, sure does improve things. (*Carbon County Recreationalist*)

Rip-rap is what I am afraid of....It is just taking away the wetlands, side edges, the rearing ponds, the place where a lot of things happen in the ecosystem. And the rip-rap is like building a ditch. You don't have....the little wet spots, the things for the little fish to hide in and rest....The otters, and everything else, comes in through there. When you rip-rap like that, you increase the force of the river coming down, and it will move stuff and it will keep moving. It will force the guy down below to rip-rap if it changes the course the little bit....[Now] he's got to rip-rap, too, so we are losing all these side wetlands that is really important to the ecosystem. (*Stillwater County Recreationalist*)

It takes an arm and a leg and an act of God to do anything as far as rip-rapping in the stream. I know one lady,...after the last flood came through, she paid beau coups bucks to keep that river where it was. (*Sweet Grass County Recreationalist*)

People are moving down along the river, and they are putting houses, there, and they are trying to save their property. You can't blame them, but the river has changed course dramatically for years, through the rip-rap....I think a lot more people are moving down to the river and wanting the safety of rip-rap. They see it around, and everybody is safe behind the rip-rap. (*Stillwater County Recreationalist*)

Certainly, I understand the people that have property, and they want to try to preserve their property, and I respect that. But the fact is, the Yellowstone is a wild river, and,...to me, it sort of comes with the territory....[We should] try to achieve [a] balance, and not be overly regulatory with citizens [as far as]...what they can and can't do with their property, but, on the other hand, realize that, hey, you're not just doing something that's going to perhaps impact a little piece of property; you're doing something that could have potential impact on a resource that has significant economic impact, [and] social impact...on a whole bunch of people. So, people need to understand [it is] a lot broader than their little piece of property on the river. (*Stillwater County Recreationalist*)

[Rip-rap] can definitely have an effect downstream. It re-energizes the river. You definitely have to take a look at that....I'd be very concerned if I was a landowner downstream and somebody put in some rip-rap. They should definitely have a say, too, and there should be some remediation, if [those downstream] lose land as a result of rip-rap upstream. (*Sweet Grass County Recreationalist*)

I'm not in favor of rip-rapping to save somebody's house who built right on the flood plain. If you build there, you take the chance. But there are some spots where I think it's appropriate: where somebody's losing a lot of land, where the river is just spreading....Maybe that's an argument for fixing [a specific place] when it blew out in

'97. A lot of that may have been caused by the old rip-rap [upstream]. It just didn't give that river anywhere to spread out. It backed up enough where it blew a new channel....It's a toss up all the time; you have to weigh good and bad. (*Sweet Grass County Recreationalist*)

Down here...[are] a bunch of rocks that are two to three feet in diameter. They are just all piled in there. They are working for that guy, but they are pushing the river to his neighbor on the other side. The more you try to hold a river in, the more problems you are causing for your neighbors down- or across-stream. (*Sweet Grass County Recreationalist*)

It's such a meandering, naturally flowing river; it seeks all these little braids and channels and so on....I'm not sure, but my suspicion is that when you start to mess around with it too much, then it's going to perhaps eliminate or degrade some of that natural structure and...habitat. (*Stillwater County Recreationalist*)

I always figured rip-rap made habitat for the fish....They say it's [only for] the big fish, but you can have two people with the same study, one for one group and one for the other, and you will never have the same answer. (*Carbon County Recreationalist*)

C. Please, No Junk as Rip-rap

To me, it's the big boulders...I. don't want to see junk in there....I don't want to go along and see somebody's old wrecked car in the river to hold the banks. (*Sweet Grass County Recreationalist*)

I like [big rocks] better than using old concrete, and stuff like that. Keep it as natural looking as you can. And you know, barbs and everything, they end up not looking natural. If you can do some landscaping, in turn with the rip-rap, you can have a pretty nice looking bank....[Use] willows and trees to create a stable bank rather than creating an armored bank....The river's a moving, living thing, so you're always going to have an instability...someplace. (*Sweet Grass County Recreationalist*)

At least they don't use old cars anymore. It doesn't really bother me, [but] I'm glad they don't do it now. It's almost become part of history. There's a '56 Ford in the bank! I'm really glad they don't do it now. If you had a chance, it'd be nice to remove some of them, but they're part of the town....They call it the 'Drive-in on the Big Horn,' where there's 50, 60, 70 cars, but I'm glad they don't do it anymore. (*Sweet Grass County Recreationalist*)

Yeah, stone is fine. We don't need the old cars anymore. And it worked. We are more advanced. As far as I am concerned, let's make it look more natural. I don't want to see pictures like down south where they cement everything around. I did see the cars for so long it almost looked natural. (*Carbon County Recreationalist*)

D. Alternatives to Rip-rap

If you want to redirect the water, rip-rapping is not the only way. You could create a [broader] situation....When the river gets big, it is best to have three channels. If the river splits up, that is when it does its best work, from a fishery standpoint. When it comes down in the summertime, and it splits up into two channels, then that is perfect, too, because you have lost your high-water channel. One big channel is not going to look good from a fishing standpoint. It creates a big lake, or big trench, and it isn't conducive to fishing. (*Sweet Grass County Recreationalist*)

The resources of the riparian zone...would be the flora and fauna on the flood plain. I think, you could follow...the cottonwoods. They are of ultimate importance to the river, but without a flooding situation, they don't regenerate. And so, the cottonwoods are very important. We have beaver problems, and some people don't want to kill the beavers; they want to save the beavers. A few beavers are good, not a lot. Once they take the cottonwood down, it is a short time before [the bank] gets eroded and...is gone. And junipers—let's not forget the juniper. It is the most amazing vegetation on the river. It can grab amongst the rock and start growing right out of the rocks. There isn't a lot on the Yellowstone but there is on the Boulder. You can't wash it out, even in high water. Those roots hang on so tight....The beavers don't bother them so much. So [cottonwoods and junipers] are my two friends. (*Sweet Grass County Recreationalist*)

We sloped, with a little bit of dirt, and put some grass clumps in there—some snake grass [and] Bermuda grass, and then we put willows in there. Last year, we had one of the biggest floods we had ever had, and it held up just fine. I have done some on my property, but I put small sandstone, small, and [I] mixed dirt in with it, and it held tremendously. (*Carbon County Recreationalist*)

With people moving in, a lot of people are fencing off the riparian area, [and it] is growing back. They're fencing it off, and...that's helped a lot as far as with the erosion to the banks. (*Sweet Grass County Recreationalist*)

We have a grant project...[for] the Yellowstone River and the Clarks Fork River for removing the salt cedar. But now, this is the last year on the project....For all the salt cedar we removed, we are reintroducing the native species, the willows, the cottonwoods, just so we don't get the erosion problems. (*Carbon County Recreationalist*)

E. The Value of Local Knowledge

I realize...there's certain things that, maybe at the local level, we don't necessarily have control of....But these rivers have been existing for a long time, and we've been co-existing with them, now, for quite a while, and we've seen a lot of change....So hopefully, we can come up with some sensible things, and I think it's always nice if it can be done through the groups and the citizens rather than it being something that gets generated from the top down....[If it comes from the citizens it] makes it a little more palatable to people. (*Stillwater County Recreationalist*)

It's got to be a commission that balances everybody. I don't think it should be totally up to the Army Corps of Engineers, or anybody else that permits it. I think you really have to show a need and [show] why this river needs to be armored at this point. There's some very good reasons,...but [no one should] have *carte blanche* to go ahead and place rocks. (*Sweet Grass County Recreationalist*)

Just so things go forward [on a] scientific basis,...not emotion because emotion is a very dangerous tool. I believe, whether it's the river, whether it's anything, you get emotion involved, and reality goes out the window. (*Carbon County Recreationalist*)

It's landowners, and sportsmen, and everybody. Basically,...everybody has to work together to make a decision. Most of the time, it's the Army Corps of Engineers that makes the decision....They have a big hand in it...[There] should be more [people involved] than them,...[and] it should be more than the landowner, in a lot of cases, too. That's a tough one, too, even in Montana. Look at some of the old ranchers, 'It's my land, and I'll do what the hell I want with it.' And they're right in a way. It is a tough one. The use and everything has grown so much on the Yellowstone. Montana has gone from agricultural to basically tourism, and the Yellowstone is a huge part of that....But you don't want agriculture to go away, because that's what made Montana attractive in the first place....[We've] got to keep some of the wide-open spaces. (*Sweet Grass County Recreationalist*)

It's a totally different river and environment five miles upstream of Livingston than it is five miles below Big Timber. It almost has to be a special case. I don't think you can adopt a policy for the whole river. It's a different fishery downstream. Below Forsyth and all that, it's an unbelievable warm water fishery...that probably isn't being utilized. Decisions being made down there shouldn't necessarily be the same decisions made up here. It has to be a case-by-case....For one thing, it's a lot bigger river down there. It's a lot flatter, less gradient. I don't think they have some of the rip-rap issues that we do, but, boy, I don't know. It's almost on a case-by-case basis. You really have to look at it. It's a tough one, especially since you're looking at the river all the way down. (*Sweet Grass County Recreationalist*)

Let's start with who would be on the board. Get knowledgeable people on board to make those decisions. There are some excellent stream reclamation people in this community. I would definitely get one of those guys....They know a lot about fisheries, and they know a lot about reclamation....They need to account for county property or state property. Down there, where the bridge is, they spent millions of dollars on the bridge. If they don't do something about that they will have [another useless] old bridge. You saw that bridge...that goes nowhere. The policy would have to consider the roads, but, most of all, alternative ideas to rip-rapping are essential. (*Sweet Grass County Recreationalist*)

I've traveled around in the west quite a bit, and I've spent a lot of time in other states....By and large, Montana does it better than anybody else...in terms of the management of the resource....Montana, being historically an agriculture, mining, and timber state, a commodities resource state, you have a lot of long-standing interests that

exert pressure....The State of Montana derives tremendous commercial economic impact from the use of the river, through tourism and tourism-related industry,...the fishing and outfitting, and guiding industry, and so on. So I think it's important that everybody gets a chance to weigh-in on the resources. I was just reading something in the paper this morning, and I thought it was a good comment....Something...[like], 'If you don't plan for the future, then the future's just going to dictate itself to you.' So I think it's wise that we try to look ahead. (*Stillwater County Recreationalist*)

I think you have to include more than just the government people. There are a lot of older ranchers that know a lot about the river. I think it is who you incorporate in the policy-making that would make the biggest difference. An outfitter, a reclamation specialist,...a white-water individual, and the experts that work for the government. (*Sweet Grass County Recreationalist*)

It seems like it is everybody's [experimental area]. The Conservation Districts, years ago, they were dumping cars for rip-rap. Now cars are not all right. Now cement is not all right. The Corps of Engineers stepped in, and started doing their little deals, and found out they didn't work. It is everybody's experimental place, to find out how to actually stabilize banks. Sometimes it is best to slope them off, add some willows [and] do it naturally, versus doing big huge projects. I am glad they quit using cars. I am glad they quit using cement with iron in it. Nobody wants to get stuck with rebar....If you want the prettiest, or the longest free-flowing river,...you need to keep some of that crap out of there. (*Carbon County Recreationalist*)

I think that it's reasonable to assume there probably could be, over time, more and more rivers having to [be regulated]. I think that most of us have a natural resistance to being overly regulated. I think that's why a lot of people live here, and want to live here, because they want to have less government regulation...over their lives. That's one important aspect. They don't want the government telling them how to recreate....With that said, I'm not sure how you get around that....I think if you just sit idly back, and just don't do anything...things will just deteriorate, and then you'll be just totally worse off....Nobody really wins on that deal. So, I'm not a big proponent of [regulation], but I see that it's probably an inevitable thing...when you have a lot of competing interests. (*Stillwater County Recreationalist*)

V. Sympathies and Concerns

A. Agriculture, Economies and Land Prices

You can't just...tell a guy who's been farming and ranching for, oh, 50 or sixty years that the water to irrigate his grass, to feed his cows is—[that] it's more important that I have [water] for the fish and the river....I mean, how do you?...This has been such an agricultural place for so long. (*Sweet Grass County Recreationalist*)

Most of them are very wealthy that purchase property. They come to visit, and then they'll come back, and they'll buy a ranch for two million dollars. And that farm family

who's struggled their whole life, moves to town and builds a house—you know, easy street. But I don't know how cool that is. It'd be nice to have the property in the family forever. (*Sweet Grass County Recreationalist*)

I know he's losing more and more hayfields all the time....I'd rather have him stabilize the bank, and keep a bunch of silt from going into the river, than trying to protect the houses built right along that thing. (*Sweet Grass County Recreationalist*)

I've lived here my whole life,...[and,] as for agriculture,...I grew up on a little ranch on the north of town on Big Timber Creek....Water is huge here. (*Sweet Grass County Recreationalist*)

Land prices are going up. Farmers can't afford not to sell. You can't buy a piece of ground that will support the farmers. (*Carbon County Recreationalist*)

Agriculture is on its way out, especially with fuel prices and everything the way it is. Which is a sad thing, because who is going to raise the food for the country? (*Carbon County Recreationalist*)

Will agriculture still exist at the level it does? I suppose it will to a certain extent. We'll still have recreation, whether it's boating and fishing....I think we'll still continue to enjoy it. I kind of think people are pretty mindful of that, I really do. Realizing that we got a good thing, and it's important that we try to keep it in reasonable shape so we continue to use it, and those who follow on can continue to enjoy it and use it. (*Stillwater County Recreationalist*)

To a degree, if I was a farmer, and [my land] was being washed out, I would want to rip-rap. (*Sweet Grass County Recreationalist*)

Another plan is to try to fence the rivers off....You can't have it all one way or all the other way. We need to learn how to use it properly. (*Carbon County Recreationalist*)

B. Local Values

Being able to heat people's homes [by building a power plant near the river]...is probably a higher value use of the resource than fishing and boating, and, conceivably, even [higher than] using it for irrigating hay meadows....I guess, if push came to shove, then probably...it would be looked at in terms of that old thing, 'the greater good.' (*Stillwater County Recreationalist*)

Big Timber had about ten or 12 guys....They were called the 'Red Neck Express,' ...and they would go to Helena, and they would fight [various issues]....It's a western way of thinking: I own the land and everything that's on it, and every good thing that goes through it, [including] the elk [and] the deer. (*Sweet Grass County Recreationalist*)

There are some good things [that the newcomers bring]....One guy employs...college kids coming home for the summertime. He keeps them busy, pays them well. I have a friend whose daughter is...making \$12 an hour, where the standard rate in Big Timber for babysitting is two bucks an hour....One guy [asks me,] 'Can you make me a chicken dinner?' And he knows it's expensive....it's like \$150. I mean, I have to stop everything, and go shopping, and cook dinner....It's absolutely ridiculous. But he's more than happy to pay. (*Sweet Grass County Recreationalist*)

C. Concern: Agricultural Runoff

It is a delicate area—the whole ecosystem along the river. The government, and the laws, and the regulation, can stretch their arms so far....[According to the law,] you can't spray certain chemicals on [fields] because that will end up in the water ways. Well, they are doing that....Fertilizers are really bad for our waterways, but we're still doing that. (*Carbon County Recreationalist*)

Most of us are very conservation-minded....Most fly fisherman are...more protective of the resources than farmers and ranchers, as far as the stuff they put on their fields to irrigate....I always take a big bag, and we just fill the bag [with trash]. (*Sweet Grass County Recreationalist*)

Limiting the building along the shores is my big worry, and the amount of livestock [runoff from] feedlots. [Feedlots] need to be back a little bit. But, you know, I fished below a feedlot...[and] I got that huge catfish. (*Carbon County Recreationalist*)

D. Concern: Water Rights

Water rights are huge, huge. It's huge....There's a guy,...he's owned that place for several years....He had some of the oldest water rights...and he sold them, or gave them, or deeded them, or I'm not sure how it worked, to the Fish and Game....So some people up above don't have enough water to water their fields, [but] his water gets down, and he's using it for the fish. (*Sweet Grass County Recreationalist*)

Irrigation has a long history of legal rights to water. That is fairly important, as it is historical, but some of those days are past. If we are going to allow a few people to have rights because they have had rights for so long at the expense of the masses, we are into a feudal situation. Just because they have been there for so long, and have those rights, doesn't mean they should have them forever....I think it is fair to compensate people if you have to take away some of those water rights, within reason. (*Sweet Grass County Recreationalist*)

E. Concern: Ice Jams and Floods

Ice jams can be a real issue. If they are big enough, they can probably cause as much damage as anything there is. They gouge the river, kill everything in the path. (*Sweet Grass County Recreationalist*)

During the flood years of '96 and '97...lots of people lost lots of ground as the river changed courses. It just took, and gave, one side to the other....The ice jams in the winter will move holes around...and cut up [islands]. Ice jams do a lot of things as far as carving the river. (*Stillwater County Recreationalist*)

I think in certain spots you can prepare a little bit for [floods], but nobody knows what's going to come and how big it's going to get. When it hits 37, or 38, or 40,000 [cubic feet per second], there's only so much you can do. At that point, you're not stopping it. You might try to do something to fix it or stop it from the next time, but it will do what it wants to. (*Sweet Grass County Recreationalist*)

F. Concern: Coalbed Methane

The coalbed methane situation is...one of the big deals going on in Montana, and a lot of people...downriver are really concerned about that because they are not sure [what the effects might be]. (*Stillwater County Recreationalist*)

Laurel to Springdale: Residential Interest Group Overview

Fifteen interviews were conducted with property owners holding 20 acres or less of land bordering the Yellowstone River, or within 500 feet of the bank. Names were obtained through a GIS search of public land ownership records. These names were randomized within counties. Other people living very near the river and whose primary incomes are not generated by agriculture were also recruited.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|---|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Laurel to Springdale: Residential Interest Group Analysis

I. Living Near the River

A. Appreciating Scenery, Wildlife, and Serenity

Paradise. It's just great, great living. Private and beautiful. We are so lucky and privileged to live here; it's just wonderful. We have about two and a half miles of riverfront, so we don't have any neighbors close, and it is just great....The river is the reason we are here. It's the whole thing. There is constant action going on at the river, whether it's birds, or fishing, or deer, or whatever. There is always wildlife around which is our great love. We cultivate our land for wildlife. (*Sweet Grass County Residentialist*)

Everyday I walk down my hall, and I have a new picture window. And you know, it's just awesome. The colors in the fall are beautiful, [and] most of the time the sun's shining on the mountains. We can see Granite Peak, we can see all kinds of activity in the river with geese, and we just love it, it's just awesome....My heart just feels so good. This is our place. (*Stillwater County Residentialist*)

You can look at the river, and you can walk along it. It's so peaceful, you know, it gives you such a sense of peace and serenity that you can't match anyplace else....We can just go and have a nice afternoon walking along the river....I used to sit here, and just get tears,...and I still do, you know, because it's wonderful. It's wonderful to be able to enjoy it. (*Stillwater County Residentialist*)

The beauty of our surroundings. You have all the wildlife, the birds. It's just fun to see all of that down at the river. The different birds,...the pelicans,...eagles nesting....It's kind of a sanctuary....It's a habitat....The blue heron's nest, and the rookery. And it's unbelievable...the number of blue herons....There's a lot of bald eagles on the Yellowstone. I think that's a wonderful quality. (*Sweet Grass County Residentialist*)

Well, I've been here all my life,...and when you're around something all the time, you learn to appreciate [it]. You know the beauty, and what it offers, and what it gives....You get to enjoy being here, and...it makes you want to stay around. (*Sweet Grass County Residentialist*)

I will say that if we have ever talked about leaving, or moving, it is the river in my backyard that keeps me here. I love my backyard,...and being able to see water is important to me. (*Sweet Grass County Residentialist*)

There is a lot of wildlife out here....We see deer, turkeys, pheasants....bears, cougars...mountain lions, elk. There was a moose here....A big bull came across the

river....The river is like a corridor for animals to travel, and they will move great distances along it....They actually use it like a highway, so you see a lot of different animals come through....Geese, ducks, sandhill cranes, two pair of bald eagles, and a couple pair of osprey....We have feeders up, [and we've seen]....probably, 30 species that we identified in a book. We are not bird watchers, per se, but we just write down what we see, and we kind of expect them when they come. (*Stillwater County Residentialist*)

When we started floating on a raft, I gained a much greater appreciation of the Yellowstone River because you just see it from a different angle. You're part of it; you're in the midst of it. You're seeing all the birds; you're seeing all the people fishing. You're picnicking on an island and finding petrified wood and agates, just enjoying the beauty of how it is out here. No phones. There's mountains, and there's blue sky, and there's all this beautiful scenery along the way....I developed a new appreciation. (*Sweet Grass County Residentialist*)

We enjoy walking along it. We enjoy fishing in it. We enjoy walking along and picking rocks. We enjoy watching the deer. I mean, they cross from there to over here. It's wonderful seeing them and the beaver splashing....We've seen eagle,...with the spotting scope, and we're watching them tear the meat off fish, and it's just wonderful. I don't know how many different things we've seen. We've seen unusual birds that are not probably common to this area. (*Stillwater County Residentialist*)

[The geese] come up here in the yard even. Yeah, and walk around out here. [We] have them on the pictures...out in the yard, here, just walking around in. And we learned something that we haven't found in the bird books. They grow a feather, during mating season,...like a little ponytail right back, here. And...after they've hatched the young ones, that feather is gone. (*Stillwater County Residentialist*)

B. The River as Taken for Granted

I just take it for granted....It is just there. It is a part of everyday life. We don't play on it a lot. Occasionally, but not very often. I am not a fisherman. We float it once in a great while. Go down and picnic once in awhile. I can't say it is important to me....It is not something I have to deal with on a day-to-day basis. I view it more as recreation than anything. (*Sweet Grass County Residentialist*)

I don't fish. I'll probably take my two little ones fishing when they get older, so they get to learn. I don't know how to swim, so I don't get in the water too much....[When] you're born and raised with it, you kind of take a lot of stuff for granted. A lot of people from here, for us, it's an everyday thing. (*Stillwater County Residentialist*)

You can live here all your life, but maybe never have that appreciation for the river because you never spend any time on it. You take it for granted. If you never take advantage of it, you never have that appreciation. (*Sweet Grass County Residentialist*)

C. *Keep the Yellowstone Natural*

Personally, I like knowing that the Yellowstone has no dams, and I am all for keeping it that way....Part of me says the river was there, first, and if you are going to live in a place like that, you should know before you do it....Probably, if I was buying a house lot, I wouldn't buy there. I wouldn't build a house there or in the flood plain, if there was a potential for more damage. The river will eventually go a different way. (*Sweet Grass County Residentialist*)

As long as it stays natural, that's the best. No dams, no changes. Just leave it...like it is today. I mean, I wouldn't like to see anybody going out there and building something in the islands, or anything else....I like to watch the river come up in the spring and go back to normal. And just, you know, wait for [William] Clark to come down. (*Stillwater County Residentialist*)

I think it is important to keep it a dam-free river. I think that is important. I think it is important that they protect the species of fish that are living there, and their habitat, and do what they can to keep it a great recreational river. Plus, it is used for agriculture. That is real big around here, too. Continue to serve those purposes that it has [served in the past,] and keep it clean. (*Sweet Grass County Residentialist*)

I think it is a pretty neat part of Montana history. And where it originates in Yellowstone Park, and is still free-flowing, I think it is important to protect that. I think it makes our part of Montana special. It is a huge piece of who we are as a state. (*Sweet Grass County Residentialist*)

Don't put a dam on it. Don't mess with the river. Keep it for recreation. (*Stillwater County Residentialist*)

D. *The River as Shared Element of Life*

Everybody thinks we're all entitled to the river. It belongs to all of us, so that's what's hard. It doesn't belong to me, or to you. We all feel that we should have easy access to it, [but] I don't know how you get everyone to play together well. (*Sweet Grass County Residentialist*)

I will live here while I am still able to maintain the property....I like the freedom. I like the wildlife. I am trying to maintain the watershed. We like trees....We like to sit outside. We like the fresh air and the quietness. We lived in Billings for 30 years....We like the elbow room. We like the birds. We will stay here for as long as we can. I am concerned about the future, and people that live along the river. Make sure that the river is protected when people build along the river....I am not a tree hugger, but I think there is a happy medium. You have to use natural resources, and you have to protect them. (*Stillwater County Residentialist*)

Being an agricultural state, the river is very important all the way down....They've used it to irrigate croplands for years and years. I know...[because] I did a lot of crop insurance....We're such a great food source, for ourselves and other countries. I really think agriculture should have as much [water] as any. (*Stillwater County Residentialist*)

Every July they have the annual boat float, which is a celebration of Lewis and Clark, but it is typically a big drunk. It used to be really wild, and it has tamed down. Not as many [participate] as...[did] 25 years ago. They leave the fairgrounds in the morning, and for a couple of hours you can hear them whooping and hollering. It is kind of fun. (*Sweet Grass County Residentialist*)

The kayakers come and knock on the door and ask for access to the river....There are some teenagers in town that have discovered where we have a campfire down by the river, and they made it their party zone. It is not a huge problem. (*Sweet Grass County Residentialist*)

Maybe a canoe will pull over when the water is lower. They will stop, or a fishing boat will come over, or they will go on the other side of the river in the sand bars. It's okay....I have gone down and talked to people, and we wave at them when they go by. If they are having trouble, we want to help. And you always check. If we hear yelling,...we will go down and check that they are not in trouble. It is not like they can't be on there, we don't care. It's their river too. (*Stillwater County Residentialist*)

We realize that if someone is on the river they can get off and get out as long, as they stay within the high water mark....They can come along, and stop and fish along the bank, as long as it is at, or below, the high water mark. That is the law....[But,] as I understand it, there are some rich people that are trying to take it away. (*Sweet Grass County Residentialist*)

Fish and Game suggested that, due to the conflict...he would patrol the area....This worked well until he was no longer working for the Fish and Game....Then people began camping and leaving their trash everywhere, and encroaching on us....[They] were not considerate of private property. (*Sweet Grass County Residentialist*)

Well, there's always going to be a conflict between the fisherman and the recreationalists....There's a lot of people that boat upstream with inboard motors. They zip around, and it bothers the people that are fishing. There's people here who make a living guiding fisherman, [and they say,] 'Hey, we're trying to fish over here.' And [sometimes] you've got a family out floating the river, having fun, making noise, splashing around, and somebody's over here trying to fish. (*Sweet Grass County Residentialist*)

I can see both sides: the people wanting on the river, and the private landowners next to [the river] that don't want people going through their land to get on the river. I like to use the river, but I also understand that people don't want you driving through their bull pasture, and leaving the gates open, and driving all over their pasture, and killing the grass and stuff. The best I can see is public access in spots along the river, so you can get

down there, and then you can use it. You can use it next to a private land, as long as you get on it legally, which I agree with. Some people think that you shouldn't be able to use that river next to their land, but I don't agree with that. I think it's a public river. But, as far as any change, I don't know what could be done to make it better. I know there are problems. (*Sweet Grass County Residentialist*)

Boy, if there is any water around here, there are people using it. (*Sweet Grass County Residentialist*)

E. Ruralness of Subdivisions

A lot of [living in the subdivision] is to have space, clean air, clean water. A lot of people like to have their five or ten acres so they can have a horse, or a couple animals, or a little bit of space to move....Everyone wants their five or ten acres, especially the people who come in from out-of-state. They live in a city, and they come out here, and they think it's beautiful—we've got clean air and clean water, which a lot of the United States doesn't have. And they think that is an asset. (*Stillwater County Residentialist*)

At first, I guess, I was a little hesitant, because it was five miles from town, and [I wondered] what was it going to be like? But it was the best thing that ever happened. It was great when our son was home....He had great times down at the river. They would build forts, and go fishing, go swimming. I mean, they would spend hours down there. It was the perfect playground. It was great....I don't know if when we purchased the lot we realized how important it would be. (*Sweet Grass County Residentialist*)

I don't really have a lot of desire to live in a great big place. [This is] a great place to raise a family....The clean air, clean water, that's a big plus, anywhere. (*Stillwater County Residentialist*)

I grew up here. I like it. I like the river, and I like the mountains. It is a good place to live. It is a good place to raise our kids....It is home to me....We live here for the lifestyle, I guess. That is really the bottom line. (*Sweet Grass County Residentialist*)

The biggest problem is deer. They are everywhere, river or no river....They eat everything in our yard, and strip the bark off the trees with their antlers....I love to look out and see them, but they will come up and eat flowers on the deck. (*Sweet Grass County Residentialist*)

Actually, the fact that [our home] is out of town is what we really like, and we wanted to get [our children] somewhere where they could not be running around town [and] we wouldn't know where they were. And this is really a beautiful area. (*Sweet Grass County Residentialist*)

The previous owners planted 120 trees, and I added another 20. Most of them were fruit and nut trees. So, we have got quite a few trees on the place. It was a hayfield before it

was subdivided, so there was nothing here, it was just barren ground. (*Stillwater County Residentialist*)

II. Affordable Privilege

A. A Private Commons

Well, our place right here, our subdivision owns about an acre and a half of common property right along the Yellowstone. So we have the opportunity to go down there anytime we want, and go down to the river....We have access to the river, and often we float from upriver to our common area and get out....It is just really nice having that access. (*Sweet Grass County Residentialist*)

This subdivision is unique in that there is a bridle path that follows the river for use by the owners in the subdivision. Anytime you have an easement like that, it is somewhat troublesome because there is no incorporated town out here. But if the towns grew enough, they could make a permanent easement, and everyone could use it. That is what bothers me....That bridle path was meant as a bridle path, and they shouldn't use it as access to the river. It may sound selfish, but I am paying taxes on it, and they don't. My liability covers only me, and if they got hurt, they could sue me. They wouldn't win, but they could still take me to court. That bothers me....A guy bought a bunch of the land, and is going to put in 100 houses [behind me, away from the river]. That is a huge impact. If those people think they are going to use the bridle path, I will have a problem with that. It was designed for this portion [of the subdivision], not the whole. So, the enforcement problem may be a real problem. (*Stillwater County Residentialist*)

Between us and the river is common area. And nobody can build, and nobody can live there, and it is available to everyone in the subdivision. (*Sweet Grass County Residentialist*)

We did get a great deal on the lot,...[and now] property prices have multiplied four or five times....Yes. Now we kick ourselves that we didn't buy two lots! (*Sweet Grass County Residentialist*)

We don't make a lot of money, but we aren't hurting. (*Sweet Grass County Residentialist*)

B. Interrupting Ruralness and Diminishing Privileges

We didn't want to start trouble [with the boat floaters], but we don't want them to destroy things. We had the illusion that the local law enforcement would help enforce the rules, and that was wrong. If you questioned 90 percent of the people in this state, they are not aware of it. Anybody we talked to, the title company, the realtor, they won't tell you those things. In town, it is different. (*Stillwater County Residentialist*)

Another thing, when boats go by, and they've got a pretty big-sized wake,...there is nothing to slow down any wakes,...and [the wake] can wash away the shore more than...it should....But that is just a normal thing. You can't get away from that. The other thing, we have been very fortunate [because] there is no personal watercraft used on this river to speak of. They are obnoxious. There [were] a few last year, and the last couple years. They just go round-and-round, in circles, and make so much damn noise, but fortunately there is not a whole lot to do....[When] fishing boats go up and down the river, people sight-seeing, whatever,...no big deal. (*Stillwater County Residentialist*)

[With] so many houses and congestion, I'd like to see them away from the river, and back so that when you are here, you don't see all that. I say that as I sit here 50 feet from the river in our house! (*Sweet Grass County Residentialist*)

C. Public Access Verses Private Property

The thing we do see right now is that the common property is supposed to be limited access, limited to the people who live here in the subdivision. Well, more and more people are coming from town,...or you will see them driving down here with their kayaks and rafts, thinking there is access to get down to the river. I think that is going to be more of an issue for us....How do we deal with that?...More and more people are going to be trying to use our space down here along the river....I think [it] is a class three rapids....It is on the map now, and these kayakers can see it from the interstate....I mean, I don't think I would deny them access if they would just do what they came to do, and not impact the area....If they are responsible and pick up their trash...[but] we are going to be putting up some more signs, because people don't necessarily [do what they came to do]....It is a great place....We have a camp area with a campfire ring, [and] a lot of people want to enjoy that, and you cannot blame them. But I think we will probably see more of a demand like that, people who want access to the river. (*Sweet Grass County Residentialist*)

Mainly what I get is people asking if they can put their boats in down there, and I always say, yes. I mean, why not, it's not my river. I think some people that live in some of these [subdivisions] think that's their river,...[I] tell them, 'Park your car, here, because our neighbor down there does not like it. So just park your car here.' I think he thinks he's in the middle of nowhere. That's where the problem lies. (*Stillwater County Residentialist*)

There is nothing easy about [public access]. It will get more and more complex as time goes on. You will have a greater influx of people from metropolitan areas in here. (*Sweet Grass County Residentialist*)

The people that don't live along the river don't respect it. (*Stillwater County Residentialist*)

This is private subdivision property down on the river, but it got put on a website that it was a public access to the river....There were a lot of kayakers from Minnesota coming out and kept wanting access to the river there, which is not exactly what we

wanted....They put up signs saying that it is private property, and not a public access, and for a while they put up a gate, and closed the gate. I think they had a chain there, but I don't think it was padlocked....I don't think it is a problem anymore. I think it has been noted that it is not a public access. (*Sweet Grass County Residentialist*)

We let people fish....We have a sign that says, 'You can walk in and fish the hole....Access is for fishing only'....[But,] sometimes you catch some clown in there trying to hunt, or...picking mushrooms....And you know the sign says, 'For walk-in fishing only,'...but some people don't seem to take a hint....I had one guy from out-of-state, he pulled his camper in here, and set up camp right over here....He said, 'It's public.' I said, 'No, not here.' He got off in a huff, 'Montanan's ain't very friendly. Everybody says Montanan's are friendly, but you sure the hell ain't.' (*Sweet Grass County Residentialist*)

I really do believe that river is for everybody to enjoy. It's not my personal [property]...It's not my river. And I hate to see where other people are not allowed down there. I know we [the subdivision] have 'No Trespassing' signs all over, but I would not put those signs up, and I would take them down because I don't feel that way. I think if people want to go down there and fish, or put their boat in, or get their boat out, I don't see a problem. (*Stillwater County Residentialist*)

A lot of guides [are] on the river now, just this last year. Five years ago, we might have occasionally seen one, but this last year, we have had 15 to 20 guide boats a day come by. We see them every day. They all come by about the same time, every day. There gets to be a lot of them, and then they get feeling real possessive of the river. They can be real rude to land owners, and the general public, too, because they don't want anybody bothering them and their clients, fishing their water. I would hope Fish and Game would put some control on those....My son guided; I have nothing against guides, ...but you've got to realize it is not your river, and you need to be courteous to the general public. (*Sweet Grass County Residentialist*)

HUSBAND: Another thing that is grinding people bad: rich people buying up this land along the river, and shutting it off to hunting and fishing. That is a big issue. WIFE: As a subdivision, we don't allow access to the river. HUSBAND: If somebody asks, we would let them down there. WIFE: Not just someone off the street. HUSBAND: No, [but we would] if we know them. It isn't a public access; it is private land. We wouldn't deny access. WIFE: We do to outsiders. If someone comes from Billings, and wants to fish, we would tell them no. HUSBAND: That is our policy to keep it kind of private. The Fish and Game need to have all the accesses they can get. They need to maintain them, and clean them. There are a lot of rich people buying land and shutting it off. Public access is important. (*Sweet Grass County Residentialist*)

D. Covenants as Protections and the Complexities of Management

Subdivisions are governed by a set of covenants....Have the people who own the subdivision, who own that property, make some good sensible decisions on...this is what

you have to put in, or this is how far from the river you have to build. (*Sweet Grass County Residentialist*)

We were having problems next door. They decided to be hateful, and they put a gate on the bridle path, and locked it, and put a 'No Trespassing' sign. Other people brought it to the homeowner's attention that they didn't want the gate,...[but] they will have to file a civil lawsuit...to get them to take it down. Or the association has to go against them, and nobody would do anything. It was a civil thing. Unless there is criminal activity, it is a civil lawsuit. Each line on the covenant stands on its own. Those people next door have turkeys and chickens. They aren't supposed to have them. Manure is not good for the river. It goes into the groundwater. They shouldn't have those....It is against the covenants,...[and] it is a federal fly-way for birds. It is a wild river. There is a reason you can't have poultry. (*Stillwater County Residentialist*)

The [subdivision] covenants are to protect the environment, the land...They put a bridle path in as an easement so they can subdivide it and everybody can enjoy the river, the water, the land....Those people did not read [the covenants]. Other people did not....It started with motorcycles. They were racing down by the river...and we wanted it stopped because they were destroying property. We have a real erosion problem where they were riding on the banks of the ditches....We were going to take them to court....I took a petition around because nobody else wanted to do it. We didn't have to take them to court....The dust was unbelievable. When the wind would blow, all you could see was a white cloud. And the noise carries. We are 30 acres away from them, and our windows rattled. Let them go do it somewhere where there aren't homes. (*Stillwater County Residentialist*)

I think it has to be compromise....If we want to protect the river, there...[are] measures we have to take, but, at the same time, we want people to be able to enjoy it....I'd hate to see the river become something controlled to where we're just letting outfitters down to fish, and nobody else can go on the river. I would be sad if it came to that....[I would rather have] people taking the initiative, and saying, 'Okay, we'll run this.'...People have to assume some responsibility, and they have to be educated on what we're doing and how it impacts the land, and how we can work together so we can enjoy it.... It's going to have to be a give and take thing, especially as we become more populated. It's got to be a give and take thing....I don't know if that's what the Conservation District Council is, I don't know what their goals and objectives are, but if that's what they're wishing to promote, that would be wonderful. (*Sweet Grass County Residentialist*)

When you have more people, you need more water. How do you share that with the agriculture? That's going to be one of the big questions....What happens to agriculture? I know in Billings a lot of that Ag land is being bought up and is being subdivided. Is the amount [of water] they use less or more in those subdivisions versus what farming would use? What is the trade off there?...I think that would be as big a concern as any. (*Stillwater County Residentialist*)

All through Montana history, you could do what you wanted. But now you have to have a permit for everything. So that's changed. (*Stillwater County Residentialist*)

That's one of those things where the local or state know as much [about regulating subdivisions], or more so, as the federal government. (*Stillwater County Residentialist*)

Life isn't fair. You've got to do the best you can with the situation. It doesn't matter what we do, or where we're at, we can't choose our neighbors. I think you have to try to make the best of the situation...best for all. You're never going to please everybody, no matter how you do it. (*Stillwater County Residentialist*)

III. The River as a Physical Element

A. Living with the River

While we are here and living along it, we want to try and control it because we want to protect our property. If no one lived along it, we wouldn't have a problem, nobody would care. (*Sweet Grass County Residentialist*)

The river splits into two channels right there, and the one makes a big bend, and it comes, BAM, right into the bank. (*Sweet Grass County Residentialist*)

Whenever that happens, and we do have floods here, there are always those houses, and homes, and land, that are threatened along the way. You know, maybe, for those homeowners, in particular, there are things that could be done, because, you know, that periodically, there is going to be flooding; it is just the nature of the beast. It shouldn't be a surprise to those people. There are things you can be doing in the off-years to protect your property. You shouldn't have to worry about losing your home into the river. (*Sweet Grass County Residentialist*)

There is no way to manage the river, [except for] a dam at the high water point. (*Sweet Grass County Residentialist*)

I don't really see there being change. I wouldn't think that there would be that much change right along here [on the river]. See, there's a highway right along the other side of that river that takes you to Absarokee. Yeah, they're rebuilding that, so I'm sure they're going make sure [the river] stays where it's at. The railroad is not going to let it go, and the highway's not going let it go....I don't see very much change. (*Stillwater County Residentialist*)

B. Stories of Destruction

We saw damage down here with ice. The ice just all of the sudden broke, and spread and knocked down trees....We had an ice jam, and it backed the river up, and it floated ice out all over this area. There were ice chunks, clear over to the bank, the size of

Volkswagens. It happened while we were sleeping, and we didn't hear it, but we got up the next morning and were like, 'Holy crap.' (*Sweet Grass County Residentialist*)

The river took that island out in about a week and a half. It had 50 to 60 feet cottonwoods. It was just covered in trees. It just took it right out, you know. That is what the river does. We just expect it is going to happen. (*Stillwater County Residentialist*)

If you own property along the river, you expect erosion, you expect change....I wouldn't want property along the river, and if I did, I would have to look at it really carefully. It is horribly expensive to try and protect it. To me, it is a detriment to own land along the river. (*Sweet Grass County Residentialist*)

We certainly have. There is a lot [of erosion] right down on the corner of the subdivision....I suppose [our neighbor] has lost about a quarter of the lot. The river makes a turn in there and just digs. A lot of that bank is leaving, and below there, too, because the owner had to have them rip-rap it along there....And certainly with the flood we have notice....And, that was major. That was major. (*Sweet Grass County Residentialist*)

You can attempt to control it, but when you have a flood, like in '96 and '97....We hauled rocks that were huge, and [now] they are sitting out in the middle of the river, and the ground that they protected is gone. You can control it somewhat. (*Sweet Grass County Residentialist*)

C. NIMLYs: "Not In My Lifetime/Years" (Folks convinced the river can change, but...)

As far as flooding and such? No, we don't [worry]. The town's going to flood before we would. We're higher than that, so we don't have a problem with that. I think if we're going to flood, I'd better call Noah in because, you know, it's going to get pretty high. (*Stillwater County Residentialist*)

I don't know if during our time down here we will [see change]....But there again, it depends on the number of floods. That is going to have the biggest impact on it every time. If that happens there is something different every time....But I don't think we will see a major change. I don't expect a new channel to be going across the hills or something. If it does that, we will be out of here! We will be building a big boat with a lot of animals on it. And one thing down here where the river runs, there is that big hillside there, so if it is going to change, it isn't going to impact this way....It was a big flood we had in 1996, 1997, and we weren't living here prior to that, but we floated it a lot, and it didn't make huge changes. That was a good-sized flood. (*Sweet Grass County Residentialist*)

Tremendous amounts [of erosion]. Acres and acres of land—gone. Gone...in various areas, all up and down the river. I would say hundreds of acres lost. And some gained....This area, right through here, isn't a problem for erosion, except for right down-

country where the river takes a turn to the left and that land was damaged....I don't think the river has ever changed course right here. When Clark came through here 200 years ago, it was going through right here. Elsewhere it goes all over the place. (*Sweet Grass County Residentialist*)

I might not be around, then, so I don't care. (*Stillwater County Residentialist*)

I know we had some flood-type waters a few years ago,...but that's probably about the only erosion that's been discussed in the 18 years I've been here. (*Stillwater County Residentialist*)

D. Flood Plain Maps are Restricting but Potentially Credible

The last time they did a survey for the flood plain was probably over 20 years ago, and it is something that needs to be done and upgraded....If you look at the flood plain maps they have got, they show us in the flood plain, and that is wrong. We are not in the flood plain. We are too high for a flood plain, but that is the federal government. What are you going to do about it? As far as people building low, I don't think they should be allowed to build in the flood plain. All it does is cause problems for everybody concerned. And for people not in the flood plain, we are being penalized....If there are not enough regulations, or if they have not been reviewed, when the river changes over the years [the maps are not accurate]....Anybody along this side of the river is required, if you refinance, to have flood insurance, and you can't fight it. If you pay cash, you don't have to have it, but if you finance, [it is required]....I mean, there need to be regulations, and people need the proper insurance, but it needs to be looked at closer and more often. (*Stillwater County Residentialist*)

[Flood plain mapping] needs to be done because it hasn't been done for a long time. The river has changed channels because it is a wild river, and the flood danger in some areas is no longer existent, whereas in other areas it might have come up. And the bad part is, people may not be aware they are in a flood channel....I must have called 50 people, and what I found out was, 'Yeah, it needed to be redone, but we don't know when we are going to redo it. You are still in a flood plain.' That is about the end of it. I say, I am not. I am 20 feet above the river. Well, you know it has to be remapped. When are you going to do it, I don't know. (*Stillwater County Residentialist*)

E. Private Commons as (Consciously?) Functioning Flood Plains

That area down there is 22 or 23 acres of common ground. It is in the flood plain, so you wouldn't want to build there anyway....In '96 and '97 we had a 500-year flood, and I don't know who the hell knows what that means, but it was the worst flooding that had been seen in human history. Most of that flat was covered with water. It was pretty destructive. It didn't affect us right here. (*Sweet Grass County Residentialist*)

And then 1996 and 1997, back-to-back. Our whole common property was under water, so it was pretty major. (*Sweet Grass County Residentialist*)

F. Rip-rap is a Known Solution, but Expensive and Difficult to Get Permits

That guy spent tens of thousands of dollars rip-rapping it to protect it. Since the flood, he has done more rip-rapping. (*Sweet Grass County Residentialist*)

I think [rip-rap] is the common method you see around here. I don't know what other things they would do. I don't know what the other options really are. That is what you see around here, especially if there is potential flood stage; you see a lot of rip-rap being spread around. (*Sweet Grass County Residentialist*)

When we're talking about the Yellowstone, we're not talking your normal Montana river. I mean...there's a lot of power in this bad boy....It will do what it wants. So...to keep it from eating stuff up, you've got to get pretty tough with it. (*Sweet Grass County Residentialist*)

People don't want to have their lives regulated to hell. (*Stillwater County Residentialist*)

Rip-rapping is the cheapest form of erosion control....Some people will use steel plates, and pound in bridge pilings, and make a wall if they are trying to protect a house. Concrete walls are very expensive. (*Sweet Grass County Residentialist*)

There are places along the river, if you float the river, where you can still see car bodies. They haven't been made to take them out, which is sad....They don't allow it anymore, but there are places where you will see the whole rear end of a car sticking out, or a hood, or a top. It's definitely a car. (*Sweet Grass County Residentialist*)

We've got a bunch of rip-rap that we got put in before all of the environmental regulations....I don't know...if we can even rip-rap now or not. It's a touchy situation....A lot of these...environmentalist seem to have a problem with it....They said it can create sediment problems....I think it all boils down to they think that if the stream wants to move, it should be able to,...even [if] some guy's paying the taxes on the land....If the river wants to take it all out, they don't care. I think that's the way they look at it. (*Sweet Grass County Residentialist*)

We did a little rip-rap on Bridger Creek last fall, and there were six or seven agencies involved in that permitting process. The county was involved in it. We were working for the county. They were trying to protect county roads. It took months. (*Sweet Grass County Residentialist*)

They said...we couldn't put rock on the bank....We could put a trench behind the bank, and fill it with rock. So, that is what we did to it. You can get away with doing that. You can fill a trench with rock, and let the river eat its way to it. It is stupid. (*Sweet Grass County Residentialist*)

And [rich people] don't want to lose [land], either. There is a guy down-country who is rich beyond rich, and he is having a hell of a time getting permission to rip-rap. (*Sweet Grass County Residentialist*)

If someone sits down with a true environmentalist, and actually hear what they believe, and why they think this way,...[that person finds out] they don't have a specific plan....They [just] seem to be against anything that nature doesn't do itself. I don't understand their thinking. It is so bizarre. (*Sweet Grass County Residentialist*)

G. Rip-rap and the Potential for Unexpected Consequences

I heard that when people rip-rap...they are causing more damage to somebody down river, or on the other side. (*Sweet Grass County Residentialist*)

The river is the river, and you are not going to control it. If you are doing something here, it is going to affect something, or someone, down there. High school geology taught me that. (*Sweet Grass County Residentialist*)

If you start changing things, and start changing water routes,...those are all unknown....If we start messing with the water supply, are we going to have groundwater? Are we going to have the other things that we [want]? (*Stillwater County Residentialist*)

When the river is flooding and eroding land it is trying to relieve itself. If you tighten up down here, someone downstream is going to get it. It is almost impossible to get permission to rip-rap. (*Sweet Grass County Residentialist*)

People that work in those types of positions in government are so far removed from the reality. They think that if you drive a bulldozer in that river, and you change something it completely upsets the ecosystem. That is bull. You can't begin to hurt it because it changes itself. In a day that river can move more gravel from one side to the other than you could in a lifetime with ten bulldozers....Experience and working around the river, and doing that sort of thing—I don't have a degree—but, it is just common sense. I have watched that river for years, and I have seen what it can do, and what it does do....I don't see how you can really hurt anything in that river with those machines. You don't want to bulldoze it out like a bowl, all the way down,...but I know dang good and well the fish are going to be swimming, and you aren't going to kill them. They will tell you it is harmful. I don't believe that....I have seen them do it, and the fish are fine. (*Sweet Grass County Residentialist*)

WIFE: Common sense tells me that if you are running big machinery in the river, there is a possibility of damage. HUSBAND: What? WIFE: Well, if you are running diesel and gasoline...HUSBAND: Yeah, there is a risk of contamination, but if you dumped 100 gallons of diesel fuel in that river it wouldn't affect nothing. WIFE: It would affect something. The fish that live right where you dumped it. HUSBAND: Maybe. (*Sweet Grass County Residentialist*)

Yellowstone River is the longest, free-flowing river in the United States, un-dammed. That is pretty neat, and to do too much to it, [such as rip-rapping], would be sad, too. To do too much, would take away from it....I don't know, just a thought there. (*Sweet Grass County Residentialist*)

They say rip-rap is bad for the fish and all that crap, and [then] you watch the guides take people where the rip-rap is. The fish love it in there. It is habitat for them. They can get under the rocks and hide. I don't understand [the objection]. (*Sweet Grass County Residentialist*)

IV. Other Problems

A. Subdivision Life, Septic Systems and Water Quality

Homeowners [should] know the impact that their septic system has on the river—this is what it can do, over time. (*Sweet Grass County Residentialist*)

You get people [in the subdivision] that think they are farmers and ranchers, and they are going to flood irrigate. Many things happen when you flood....[I was worried they would] flood my septic system, and I would have to go in and put an above ground septic system. I went to the lawyer and did some research and found out...that if you don't use [a ditch easement] for so many years [they can't use it]....Water hasn't been through here for 30 years. They are done....Who in the hell wants their septic flooded? That is the stupid thing about leaving water rights with the subdivision. Wells are a different situation. Water rights for flood irrigation should not be left with a subdivision. I think they should go back and get rid of them....People come in, and put in a septic system, and Joe Blow wants to start flood irrigating, and he is above [us]. It won't affect him, but he will get everyone downstream, and he doesn't give a damn. That is human nature. (*Stillwater County Residentialist*)

I think a lot of steps are being taken in the building area with new types of septic systems. I know this new subdivision, over here, is requiring a new pressure-hose septic system which isn't as hard on the land....[With] the old septic systems, the stuff comes out and your drain field is basically level. You don't get a rapid flow, so it just kind of goes. I would think there is a possibility of stuff getting into ground water. The new ones are pressure-hosed, that shoots it all at one time and you get quick evaporation, or something. I'm not sure....Any new system that is better is something that ought to be required. (*Sweet Grass County Residentialist*)

I think they have to be real careful with septic, and things like that polluting the river. I think they are already doing that. I don't think we could build here today, and have a septic system. I don't think we could ever get away with it, or ever get approval. (*Sweet Grass County Residentialist*)

Keep the water...clean, and useable for the needs of the people. Where it is needed by agriculture, [use it] without waste. (*Stillwater County Residentialist*)

B. Out-of-Staters Change the Local Context

I know some people sell their places in California, live on the interest, and come here and have just as nice a house for a fraction of the cost. (*Stillwater County Residentialist*)

It used to be people that lived along the river were farmers and ranchers. Now it is rich people that live there....The rich people...are taking a lot of Ag land out of production. You have extremely wealthy people buying these ranches more for toys. They are not interested in cattle production, hay production. It is just a toy, 'I have a ranch along the Yellowstone. I am cool.' (*Sweet Grass County Residentialist*)

Rich guys that bought these places and who don't care about production of hay are just giving the rights away...to the Fish and Game, which scares me. I don't like that,...because I think we are going to lose our water rights to the Fish and Game. (*Sweet Grass County Residentialist*)

You don't come into Montana and tell Montanans how to do things....There is a bar in a small town north of here that has a sign that says 'Welcome to Montana. We don't give a shit how you did it back home. Have a nice day.'...If I was going to buy a place in Arkansas, and farm [the place], I am damn sure not going to go down there and tell them how to do that. I am going to ask them how to do that. There was a guy that came up here from Georgia, and he was going to show everybody how you could raise six crops of hay in Montana....He is back in Georgia [now]. (*Sweet Grass County Residentialist*)

C. Safety: Debris and Undercurrents

The biggest problem on the Yellowstone are the undercurrents. There's a lot of undercurrents, so you don't see a lot of kids swimming in it....I don't think it's used recreationally as much as all the little rivers and tributaries that come into the Yellowstone. (*Stillwater County Residentialist*)

Lot of times when people drown in the river, this is one of the first spots they'll look....There's a hole, there, and a body will come down and sit right on the bottom....I don't know why they mess around. It's the same story every year....They jump off bridges and swim through the river, but there's under-tow like crazy in there....Boy, you wouldn't catch me swimming. (*Sweet Grass County Residentialist*)

D. Un-informed Buyers

Some rivers overflow their boundaries. That is a natural process....Getting people to understand that [is the problem]....Maybe part of that is [lack of] education. (*Sweet Grass County Residentialist*)

Maybe there needs to be a type of educational thing....It is like building in New Orleans, and building below sea level, and then not expecting water to get in....But, you know, maybe that is something that needs to be done in addition to like building codes, etc. Yes,

it would be lovely to have your home here, but a recommendation says 30 feet back, or whatever, because at some point in time, over a period of time, there is going to be some gradual wasting away of the property here. I don't know, maybe that is done. (*Sweet Grass County Residentialist*)

Well you know, I think that it is a Montana law that the public has access to the river. It is not a federal law. Well, we are from Montana, so we know that....I have no idea what other states have for access laws....I think education would probably be the best thing because out-of-state landowners don't understand that the people do have access to the river....So if they were better informed, before they bought....[It should be] something that real estate people would tell them when they are looking at land. Just let them know that this river going through your property is a public river, and it has public users. (*Sweet Grass County Residentialist*)

E. Outfitting and Regulations Seem Unfair

You have a guy making a good living on public water. I am not sure I like that. They aren't paying anything for it. Taxpayers are providing the fish. (*Sweet Grass County Residentialist*)

I have been told you can't operate a motorized boat above Springdale to the bridge above. That is what I have been told....[But] they can down here. Why? See what I mean, there is no explanation for it. It is just control. That is all I can see. (*Sweet Grass County Residentialist*)

F. Exotic and Invasive Plants

[The weeds] are very hard to control. The spotted knapweed, you can spray down there, and it will control it some. But the leafy spurge,...you cannot spray [for] near a water table, so we have put some beetles there—you know, the biological control. But it doesn't seem to be doing a lot....It is one of those things that, until they control it up river, you are not going to get rid of it down river....The water will bring more seeds down, and it spreads....It probably doesn't affect [our recreation]. We just know that it is there, and it is nasty, and it shouldn't be there, so it kind of bugs you. But, as far as actual use of the river, it doesn't affect it all. Now, if you were a cattleman, the cows won't eat it, and it will compete with the grass. (*Sweet Grass County Residentialist*)

It just got to be such a mess of weeds with really no food value for wildlife. They would walk through it, but they wouldn't stay in it; there wasn't much to eat. That is why we took it out. Sprayed it, burned it, and replanted it with non-alfalfa grass. (*Sweet Grass County Residentialist*)

Spotted knapweed, leafy spurge, Russian knapweed. You name it, if it's got a seed, it's been brought down the river....Seems to be getting worse every year....You got guys up river that they don't take care of it. (*Sweet Grass County Residentialist*)

I don't know if it's affecting parts of Yellowstone, but I know the salt cedar we're reading about consumes so much of the water it affected the water flow in Utah. And then the Russian Olives...are just taking over....I don't know if they can ever do anything to overcome that. (*Stillwater County Residentialist*)

G. Property Values and Economic Dynamics

There has to be a clause for people like ourselves who have been here and never have any intention of selling it. This land has appreciated so much since we got it. I just got a new tax notice today, and they have about doubled the value of this home out here. You can only afford that for so long, especially the people that have grown up here and farm along the river. They have to be protected some way on taxes. And sure, when these big guys come in, and spend all that money, they should set new bases,...but to keep jacking taxes up on a farm that has been here forever because now the people next door have millions is not fair. It will drive the small farmers away. [They] can't afford to stay here or to pass the land on to their kids. My opinion. (*Sweet Grass County Residentialist*)

You get greedy people....[They] buy a piece of property, put about 15 home sites on it, [and sell] them for a lot of money. It is pretty tempting. I was talking to a realtor in Big Timber last week....She had a guy from Hawaii call and said he wanted ten or 15 acres on the Yellowstone River....Buy it for me, and my budget is up to one million dollars for ten or 15 acres. So how does a local, say someone from Billings, try to come up here and find a little place to have a home on the river? You can't anymore. (*Sweet Grass County Residentialist*)

So when you start putting these huge subdivisions in,...the sky's the limit on how much this stuff's going to be worth here in ten years....I don't really want to see a bunch of houses, you know. (*Sweet Grass County Residentialist*)

I think...as more and more people want to live along the river, and develop along the river, and how much do you really want to develop along the river. It's up against the people in agriculture who have places along the river....One thing that is hard, it's change. Gosh, these ranchers have always lived along the river, and all the sudden they can't refuse the prices they get for property....It's not like it used to be, it's change, and that's something that's difficult, that "C" word. (*Sweet Grass County Residentialist*)

Yellowstone River Cultural Inventory—2006

Part V: Springdale to Gardiner

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The team also acknowledges the members and administrators of the local Conservation Districts for their assistance in identifying and recruiting participants. Additionally, members of the Resource Advisory Committee of the Yellowstone River Conservation District Council provided invaluable support. Finally, the team wishes to acknowledge the support given by the Yellowstone River Conservation District Council, the Technical Advisory Committee of the Yellowstone River Conservation District Council, Dr. Tarla Peterson from Texas A&M University, the Montana Department of Natural Resources and Conservation, the Montana Office of Natural Resources Conservation Service, and the US Army Corps of Engineers.

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Yellowstone River Cultural Inventory--2006 Preface

The Significance of the Yellowstone River

The Yellowstone River has a long history of serving human needs. Native Americans named it the Elk River because of its importance as a hunting environment. William Clark explored much of the river in the spring of 1806 and found it teeming with beavers. By 1906, the US Bureau of Reclamation was sponsoring diversion projects that tapped the river as a source of irrigation waters. The river then enabled “twentieth-century progress” and today it supports many nearby agricultural, recreational and industrial activities, as well as many activities on the Missouri River.

Management of the shared resources of the Yellowstone River is complicated work. Federal and state interests compete with one another, and they compete with local and private endeavors. Legal rights to the water are sometimes in conflict with newly defined needs, and, by Montana law, the public is guaranteed access to the river even though 84 percent of the riverbank is privately owned.

Interestingly, in spite of the many services it provides, the Yellowstone River in 2006 remains relatively free-flowing. This fact captures the imaginations of many people who consider its free-flowing character an important link between contemporary life and the unspoiled landscapes of the Great American West. As a provider, as a symbol of progress, as a shared resource, as a management challenge, and as a symbol of our American heritage, the Yellowstone River is important.

Purpose

The Yellowstone River Cultural Inventory—2006 documents the variety and intensity of different perspectives and values held by people who share the Yellowstone River. Between May and November of 2006, a total of 313 individuals participated in the study. They represented agricultural, civic, recreational, or residential interest groups. Also, individuals from the Crow and the Northern Cheyenne tribes were included.

There are three particular goals associated with the investigation. The first goal is to document how the people of the Yellowstone River describe the physical character of the river and how they think the physical processes, such as floods and erosion, should be managed. Within this goal, efforts have been made to document participants’ views regarding the many different bank stabilization techniques employed by landowners. The second goal is to document the degree to which the riparian zone associated with the river is recognized and valued by the participants. The third goal is to document concerns regarding the management of the river’s resources. Special attention is given to the ways

in which residents from diverse geographical settings and diverse interest groups view river management and uses. The results illustrate the commonalities of thought and the complexities of concerns expressed by those who share the resources of the Yellowstone River.

Identification of Geographic Segments

The Yellowstone River is over 670 miles in length. It flows northerly from Yellowstone Lake near the center of Yellowstone National Park in Wyoming. After exiting the park, the river enters Montana and flows through Paradise Valley toward Livingston, Montana, where it turns eastward. It then follows a northeasterly path across Montana to its confluence with the Missouri River in the northwestern corner of North Dakota.

Five geographic segments along the river are delineated for purposes of organizing the inventory. These five segments capture the length of the river after it exits Yellowstone National Park and as it flows through eleven counties in Montana and one county in North Dakota. The geographic delineations are reflective of collaborations with members of the Yellowstone River Conservation District Council and members of the Technical Advisory Committee and the Resources Advisory Committee.

Working from the confluence with the Missouri River towards the west, the first geographic segment is defined as Missouri River to Powder River. This geographic segment includes some of the least populated regions of the entire United States. This segment is dominated by a broad, relatively slow-moving river that serves an expansive farming community whose interests blend with those folks living along the seventeen miles of the Yellowstone River that traverse North Dakota. Here the Yellowstone River is also important as a habitat for paddlefish and Pallid sturgeon. At the confluence with the Missouri River, the size of the channel, significant flow and substantial sediment carried by the Yellowstone River makes its importance obvious to even the most casual of observers. Prairie, Dawson and Richland Counties of Montana are included in this segment, as well as McKenzie County, North Dakota.

The second geographic segment, Powder River to Big Horn River, is delineated to include the inflows of the Big Horn and Tongue Rivers as major tributaries to the Yellowstone River and to include the characteristics of the warm-water fisheries. This segment is delineated to recognize the significant agricultural activities of the area and the historical significance of the high plains cowboy culture. This segment includes Treasure, Rosebud and Custer Counties.

The third geographic segment, Big Horn River to Laurel, essentially includes only Yellowstone County, but it is a complex area. To begin, important out-takes near Laurel divert water to irrigations projects further east. Additionally, it is the one county along the length of the river with a sizable urban population. Billings is known as a regional center for agriculture, business, healthcare and tourism. This area is notable for its loss of agricultural bottomlands to urban development. Irrigation projects are important east of Billings, especially in the communities of Shepherd, Huntley and Worden. These

communities and Laurel also serve as bedroom communities to Montana's largest city, Billings. It is in Yellowstone County that the river begins its transition to a warm-water fishery.

The fourth segment, Laurel to Springdale, ends at the northeastern edge of Park County, Montana. The river in this area is fast-moving and it supports coldwater fisheries. While there is little urban development in this segment, there are some rather obvious transformations occurring as agricultural lands near the river are being converted to home sites for retirees and vacationers. The geographic segment includes Sweet Grass, Stillwater, and Carbon Counties.

The last geographic segment is defined as Springdale to the boundary with Yellowstone National Park at Gardiner, Montana and is within the boundaries of Park County. The river leaves Yellowstone National Park and enters Montana at Gardiner. It flows in a northerly direction through Paradise Valley and is fast-moving. It supports a cold-water fishery that is well-known for its fly fishing potential. Near Livingston, Montana, the river turns easterly and broadens somewhat thus losing some of its energy. However, severe floods occurred in 1996 and 1997, and local groups have since spent many hours in public debates concerning river management.

Recruitment of Native Americans

Native Americans also have interests in the Yellowstone River. They are active in maintaining the cultural linkages between their histories and the local landscapes. For the purposes of this study a number of Native Americans from the Crow tribe and the Northern Cheyenne tribe were included. Native Americans were recruited by means of professional and personal contacts, either as referrals from state agency personnel, from Resource Advisory Committee members of the Yellowstone River Conservation District Council, or from other project participants.

Recruitment of Geographic Specific Interest Group Participants

The participants represent a volunteer sample of full-time residents of the towns and areas between the confluence of the Yellowstone and Missouri Rivers in North Dakota and the town of Gardiner, Montana at the north entrance to Yellowstone National Park. Participants were recruited from four major interest groups: agriculturalists, local civic leaders, recreationalists, and residentialists living near the river. A database of names, addresses and contact information was constructed for recruitment purposes. Nearly 800 entries were listed in the database, representing a relatively even contribution across the four major interest groups.

Individuals representing agriculture interests, including farmers and ranchers, were identified and recruited from referrals provided by the local Conservation Districts, the Yellowstone River Conservation District Council and the Montana Office of the Natural Resources Conservation Service.

Individuals holding civic leadership positions, including city mayors, city council members, county commissioners, flood plain managers, city/county planners, and public works managers, were identified and recruited through public records.

Individuals who use the Yellowstone River for recreational purposes, including hunters, fishers, boaters, floaters, campers, hikers, bird watchers, rock hunters, photographers, and others who use the river for relaxation and serenity, were identified and recruited from referrals provided by members of the Resource Advisory Committee. Participants were also identified and recruited by contacting various non-governmental organizations such as Ducks Unlimited, Trout Unlimited, the Audubon Society and by contacting local outfitting businesses.

The names of property owners holding 20 acres or less of land bordering the Yellowstone River, or within 500 feet of the bank, were obtained through a GIS search of public land ownership records. Twenty acres was used as a screening threshold to separate people who lived along the river corridor but whose incomes were from something other than agricultural practices (residentialists) from those who were predominantly farmers or ranchers (agriculturalists). The names were sorted by county and randomized.

Recruitment proceeded from the county lists. Other people living very near the river and whose primary incomes were not generated by agriculture were also recruited. These additional participants may not have had property that technically bordered the river and/or they may have owned more than 20 acres. In all cases, the recruits did not consider agricultural as their main source of income.

Participants were recruited by telephone and individual appointments were scheduled at times and meeting places convenient for them. Many interviews were conducted in the early morning hours and the late evening hours as a means of accommodating the participants' work schedules.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|--|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

A total of 313 people participated in the project, including 86 representatives from agriculture, 68 representatives in local civic roles, 76 representatives of recreational interests, 76 residentialists and seven Native Americans. A relatively equal representation was achieved in each geographic segment for each interest group.

Description of Interviews and Collection of Participant Comments

A master protocol was designed from questions provided by the US Army Corps of Engineers and approved by the Office of Management and Budget (OMB approval # 0710-0001; see example in the appendix to this volume). Questions were selected that would encourage participants to describe the local environs, their personal observations of changes in the river, their uses of the river and any concerns they may have had about the future of the river as a shared resource. Open-ended questions were used as a means of encouraging participants to speak conversationally.

The questions were adapted to the participants' interest groups. For instance, interviews with agriculturalists began with the question, "How many years have you been in operation here?" while local civic leaders were asked, "How many years have you lived in this community?" Similarly, agriculturalists were asked, "Are there any problems associated with having property this close to the river?" and local civic leaders were asked, "Are there any problems associated with having private or public properties close to the river?" The overriding objective of the approach was to engage the participants in conversations about the river, its importance and their specific concerns.

Participants were promised confidentiality, and open-ended questions were asked as a means of encouraging the residents to talk about the river, the local environs and their personal observations and concerns in their own words. All respondents were interested in talking about their perspectives, and they represented a variety of views of the river, including: farming, ranching, agricultural science, commercial development, recreation, civic infrastructure, environmental activism, historical views and entrepreneurial interests.

With only three exceptions, the interviews were audio-recorded and verbatim transcripts were produced as records of the interviews. In the other three cases, hand-written notes were taken and later typed into an electronic format. The total resulting interview data totaled approximately 2,700 pages of interview text.

Steps of Data Analysis

The content of the interview texts was distilled by way of analytical steps that would retain geographical and interest group integrity.

Segment-Specific Interest Group Analyses: Taking all audio-recordings, transcripts, and field notes as the complete data set, the research group first set out to determine the primary values and concerns for each geographic segment-specific interest group. The team began with the four interest groups from the segment Springdale to Laurel. Team

members read individual interview transcripts and determined a core set of values and concerns for the individuals represented. As a team, notes were compared and a combined outline of values and concerns was constructed for each interest group in the geographic segment. Quotes were then taken from each transcript in the set to illustrate the particular values and concerns.

Outlines of the interest group analyses for the Springdale to Laurel segment were then used as aids in constructing the interest group analyses in all other geographic segments. Care was taken to adapt the interest group analyses to highlight if, and when, the core values and concerns were different in each geographic segment. The Native American perspective was addressed as an individual analysis with attention to the specifics of those perspectives. Each of the 21 segment-specific interest group analyses was then illustrated with quotes from interviews.

21 Segment-Specific Interest Group Analyses

| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
|-------------------------------------|--|---|--|---|--|---------------------------|
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Segment-Specific Geographic Summaries: A summary of the values and concerns for each geographic segment was constructed using the sets of four geographic-specific interest group analyses. Geographic summaries were written to reflect the concerns that crossed all interests groups of the segment, either as points of agreement or disagreement, and were illustrated with quotes from the four relevant interest group analyses.

| 5 Segment-Specific Geographic Summaries | | | | | | |
|--|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

River-Length Interest Group Summaries: River-length interest group summaries were constructed for each of the four primary interest groups. For example, agricultural concerns from the five geographic segments were compared and quotes were taken from the segment-specific interest group reports to illustrate commonalities and differences. Similar reports were constructed for local civic leaders, recreationalists and residentialists.

| 4 River-Length Interest Group Summaries | | | | | | |
|--|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Organization of the Reports

Overall Summary of the Yellowstone River Cultural Inventory—2006: An overall summary of the inventory was written as a means of highlighting the values and concerns that cross interest groups and geographic segments. The segment-specific geographic summaries and the river-length interest group summaries were used as the bases for the overall summary. This report is by no means comprehensive. Rather, it is written to encourage further reading in the reports of each geographic segment and in the interest group reports.

Part I: Missouri River to Powder River: This volume includes the geographic summary for Missouri River to Powder River and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Part II: Powder River to Big Horn River: This volume includes the geographic summary for Powder River to Big Horn River and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Part III: Big Horn River to Laurel: This volume includes the geographic summary for Big Horn River to Laurel and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Part IV: Laurel to Springdale: This volume includes the geographic summary for Laurel to Springdale and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Part V: Springdale to Gardiner: This volume includes the geographic summary for Springdale to the boundary with Yellowstone National Park and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Research Team and Support Staff

The project was directed by Dr. Susan J. Gilbertz, Montana State University—Billings. She was aided in data collection and data analyses by Cristi Horton, Tarleton State University and Damon Hall, Texas A&M University. Support staff included: Amanda Skinner, Amber Gamsby, Beth Oswald, Nancy Heald, Beth Quiroz, Jolene Burdge, and John Weikel, all of Billings, Montana.

Springdale to Gardiner: Geographic Segment Overview

Interviews in the geographic segment Springdale to Gardiner were conducted October 1-6, 2006. A total of 57 interviews were conducted, including individuals with agricultural, civic, recreational, or residential interests as their primary concern.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|---|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Springdale to Gardiner: Geographic Segment Summary

The most important thing is to be proactive and not assume that problems will solve themselves. The only thing that happens with that passage of time is the two sides of the issues become more concrete in their positions and less willing to look at the common elements of interest. (Park County Local Civic Leader)

Introduction

This segment, defined as Springdale to Gardiner, essentially takes in the river as it flows through Park County. A review of the interview data for Park County suggests that people in this area engage in five primary discussions when asked about the Yellowstone River. First, they seldom speak only of the river, as they are likely to broaden the conversation to a discussion of the changes that are occurring in Paradise Valley. They see their valley as changing rapidly. Second, the floods of 1996 and 1997 left lasting impressions on the people of Park County. Even newcomers are aware of those events and of the devastations visited upon locals. Third, many people in Park County are vocal participants in public deliberations concerning the management of the river. The 1997-2003 Task Force created a legacy that continues to define discussions of the river and its resources. Fourth, then, are the particular topics that continue to generate discussions in the wake of the Task Force. These include debates about rip-rap, setbacks and Mill Creek. Finally, a set of observations emerge as the Park County residents both reflect on the Task Force and move forward. These observations are shaping community members' concerns about the river, the role of governing agencies and local commitments to future public processes.

Paradise in Flux

Virtually everyone who lives in Park County appreciates the beauty of their surroundings. They all agree that the area south of Livingston, Paradise Valley, is aptly named and that perceptions linking the area with Yellowstone National Park are important in establishing broad recognitions of the special beauty in which they live:

I feel real fortunate to live here. I mean, they call it Paradise Valley and it is.
(Park County Residentialist)

The word Yellowstone is a very magical word. But ...when [the] Yellowstone is threatened there is an incredible rally worldwide. When you talk to people from elsewhere it means the last free-flowing [river], the last preserved river. (Park County Recreationalist)

It is a place of unbelievable beauty....Tremendous beauty....[This area] is very pristine and clean, and wonderful air and light, and very clean compared to other parts of the country. Fantastic wildlife. The weather changes all the time. It is entertaining just to watch the weather. It is really beautiful. I don't tell other people that. I just tell them I enjoy it and leave it at that. No sense advertising too much. (*Park County Local Civic Leader*)

Whenever you mention the Yellowstone River to anybody, anywhere in the country, their eyes kind of light up and they kind of perk up. Because anybody who's an outdoorsman knows about the Yellowstone River. This is one of the wildest rivers in the world, and the fishing is unbelievable. It came from the Park and it kind of reminds you of the Park, and to say that we're along the Yellowstone River that's kind of a feather in our cap. (*Park County Agriculturalist*)

Many people of Park County articulate strong senses of personal connection to the land and the river:

There is a relationship that forms working with the land. You learn to love it, and it becomes part of you. It becomes part of your character. It has some very formative influences on who you are. It becomes part of your soul. I think of the legacy and the heritage. Our kids understand that formative influence on their character. This place defines who they are. (*Park County Agriculturalist*)

The Yellowstone [River] is my cathedral, that's my church, that's my spirituality, ...it's where I charge my batteries. It's my connection to the natural world. (*Park County Recreationalist*)

The mountains have a...type of impact on the individual, even if that individual doesn't acknowledge it....The river has an impact as well. Without the river, the mountains have too much power and actually impact your ego. The river provides a balance,...a healing,...a strengthening of your ego. (*Park County Residentialist*)

[People are drawn to the river for]...the surrounding beauty and the river itself. People like to be on it and look at it. They like to fish it. They like to sit and contemplate life. (*Park County Local Civic Leader*)

However, the valley is undergoing obvious change as many agricultural areas are converted to residential areas. The shift both reflects and reifies a shifting economic base in which agricultural activities are much less lucrative than real estate development. An obvious dynamic is that farm and ranch families sell their marginally profitable agricultural lands to residential developers who invent landscapes that are attractive to wealthy outsiders:

It looks to me like the agricultural lifestyle is going by the wayside. This community was an agricultural community at one time, and I think it's migrating

the river, to a more recreational community. I think and feel there is some miscommunication between what the ranchers have to offer in this field of recreation. There are a lot of ranchers involved in recreation as well, and it just seems to me like there needs to be some education as to what everyone can offer. So it can work for everyone. (*Park County Agriculturalist*)

We're sitting on a gold mine and starving to death. (*Park County Agriculturalist*)

We have CEO's from big companies...that fly in with their jets and helicopters. They will spend a day, or a few days, and then they are out of here. The rest of the year we are taking care of it. We worry about weeds and roads...[while] they have one little ranch manager whose authority is limited to keeping people out....We don't want to be a rich man's Disneyland. They come, they go....We are trying to maintain something and still be progressive. (*Park County Local Civic Leader*)

I'm expecting to see more recreational ranches more houses on the river, more houses in the mountains....more of the high income, non-resident, second home people that don't rely on this county to provide their income....The people that can afford to have a second home can afford more recreational activities. They tend to use the recreation harder than what was done 20 years ago when the majority of the land was owned by Ag people. (*Park County Local Civic Leader*)

Montana [has] always been an agricultural state. In the Paradise Valley...there's still a lot of agriculture there, but a lot of that Ag land is [where] houses [are] built now...with part-time residents that are here for a few months out of the summer. (*Park County Recreationalist*)

Most of the ranchers are looking down the road and thinking, if they get in trouble, they can subdivide. From what I am hearing, the price of the lots on subdivisions is going down. They aren't selling like they were. (*Park County Residentialist*)

This new dynamic is regarded by most as a simple reality, but it does not occur without a sense of loss among the residents who have lived in Park County for many years. Some residents even anticipate that the attractiveness of the valley will be ruined by those seeking to share it:

When I was a kid, agriculture, and particularly livestock, was far and away what everybody was engaged in. They were all working farms and ranches. Recreation was interesting, but it was way down there [in terms of economic importance]. Now everybody that has any land out there has either sold it or is waiting to sell it. [There is] hardly any livestock....A lot of ranches exist in name, and maybe in area, but they are purchased by absentee owners or part-timers, and they don't have any interest in livestock. It has been a whole different slant on the vegetative

and ecological part....The farm ground is worth so much...they can't afford to not sell. (*Park County Local Civic Leader*)

That's like the population growth that's going on all over the world, there's just no way to stop it. I mean we can try to slow it down, maybe control it to a certain extent. Sure it would be great if there was no more houses ever allowed, here...draw the line. But we can't do that. There's too many individual rights that you're violating when you try and do something like that. (*Park County Agriculturalist*)

You know, that's progress, and I can understand that, [but] I don't like that. I would prefer that people held onto it and kept it in a big block of land, and used it for agriculture. But I can understand why that doesn't happen. I mean money seems to be what drives everything. (*Park County Agriculturalist*)

Say someone is 18 [years-old], when they turn 30 they would love to have a summer place in Montana. Fine. They have to wait until one comes up for sale. It [should be] like wanting a real Class-A apartment in New York City. Nobody is going to build you one, you have to wait until the next one comes available, [and] there might be a two-year waiting list....Let's take the 100 homes that are [within] a ten or twenty mile distance along the river and make them really prime property because nobody else is going to build right next door....You're going to have to wait until one comes up for sale. (*Park County Agriculturalist*)

Ag lands contribute to the beauty of the area, the open space of the area....I like the conservation easements....The conservation easements are controversial, but I see them as protecting us from developers. Do we want open space or do we want houses? And the other side of that is, ...if you see the beauty of the Paradise Valley, a lot of the beauty is [in] the open space the ranchers are protecting....Which people don't even see, especially environmental groups, which really aggravate me. That's why you have wildlife on those fields and birds. If you had houses there, you're going to have a groomed lawn and too many horses. (*Park County Local Civic Leader*)

The real-estate developers...know it's wide open...there's no constraints on developers and I think that's holding a knife to the heart of the Yellowstone...there's no plan. The county planning commission is populated by real estate developers... I see a very deep connection to the river of all of the people here, but nothing that says, 'Wait a minute this is a real gem and let's keep this at least like it is, without further degradation.' (*Park County Recreationalist*)

The real estate developers have a huge amount of power both in the property and the way they market them and how they are organized....We have this huge issue between these people that can't see the change and are unwilling to accept the adverse change and the people who say it is going on other places and we need to

stop it right now. Both sides have these real knee jerk reactions. (*Park County Recreationalist*)

The development is just unreal....At night...I used to drive around and see a dozen lights in the old days, and now there are just hundreds of them, thousands of them, literally. So a lot of the ranches have been chopped up. But it's dollars....They can make more selling it for a house site than they could making hay. (*Park County Residentialist*)

Developers...go and dangle two million dollars in front of somebody's little ranch....[The ranchers] are going to take it. And that's happened a lot. So you're actually losing some of the rural people....[This began in the] late '70s. (*Park County Residentialist*)

Thus "local development" is a primary topic of discussion in Park County, and many people express regrets concerning the ways it changes their landscapes. However, at least a few openly recognize that the community also benefits from having influxes of new people and new money:

It's kind of a good/bad thing because...the tax dollars still roll into those places, but yet the people are only here for a small part of a year. So the population, in a sense, is down, but it's still the tax dollars....it's a good/bad thing. (*Park County Residentialist*)

The Floods of 1996 and 1997

The communities of Park County were greatly impacted by floods in 1996 and 1997. Those events were devastating to more than a few families with homes near the river. As well, some productive lands were also, at least temporarily, put out of commission. At least one local official is convinced that flooding will, inevitably, happen again:

The flood of '96 changed my property....The island broke in half and...when it broke the force of that came over and hit that island and doubled back. My neighbor had very poor rip-rap and [the water] found the weak link and just kept coming to my house....I lost 100 feet [of property]...and part of the house. (*Park County Residentialist*)

In 1996 we lost quite a little bit [of land]....We lost quite a bit this year....We recently...got it re-surveyed and found out that there isn't, and never has been since we've owned it, as much land as we've been paying taxes on. We've been trying to obtain two titles on this property....Once we get that done we will take it to the county treasurer and see what we can do about that. (*Park County Residentialist*)

If it does come out of the banks, it goes onto us. It floods some of our hay meadows. So be it. We can clean up after the water goes back down. It's just...basically nature taking its course. (*Park County Agriculturalist*)

We've had what you call sheet flooding, but we were never in any trouble. That's where it comes—it doesn't cut, and it's not fast—but it spreads out. Once it gets to a certain height in the flood plain it just flows through the flood plain. And actually it gave us about two inches of new sediment, [which] cut the grass for two years from production, and then after that we really benefited from that amount of sediment. So, in a way, that's the way the system works. (*Park County Agriculturalist*)

[The] flood issue is always a problem....We have an affidavit that shows, back to 1865, that this property has never been under water. But in 1996 and 1997 it came [and we had] one or two inches of breaching back here. We sand-bagged portions of it. Of course, when a river is that big, you can't stop much....We didn't flood but a lot of people did. (*Park County Recreationalist*)

The Armstrong and DePuy and Nelson spring creeks....are a valuable asset...[that] brings a lot of money into the economy and they are a unique fishing experience....[At the] campground fishing access, the river eats directly into the gravel. This fills up the river bottom with gravel and it spreads out. It elevates the flood plain. It damages the spring creeks on the east side of the river in that area....These last two high water years really devastated the spring creeks. Nothing has been done as far as I know. No one wants to acknowledge that it is a problem, but it is....They don't know how to deal with it....When you get these large floods and especially if the river is pushed out of its channel, it tends to go down those channels and the spring creeks are located along the western edge of the low lands. (*Park County Residentialist*)

With respect to the river, I am not panicked about the river in the next ten years. I feel pretty good about where we are going with the Corps of Engineer's works and that they will come up with some measures that will prevent big floods. I have also lived around rivers enough to know that sometimes a river will just jump. Unless you have 14-foot flood retaining walls, there may come a time...despite the best efforts...[when the river] will jump. That is somewhat incumbent on living by a river. I certainly realize it is something that we may have to go through. (*Park County Local Civic Leader*)

In the aftermath of the floods, the number of applications for bank stabilization permits soared. Conservation and environmental groups began to pressure river officials to consider the cumulative effects of such projects, and many Park County residents became vocal participants in arguing for, or against, stricter controls.

As management authorities shifted away from automatic approvals of permit applications, the community entered a difficult period. In addition, complications regarding flood plain designations surfaced as exasperating problems for local officials:

1996 and 1997 were historical record flood years and...conversations have really been stark because of those two major floods....I think people got scared about protecting their properties and some properties were lost. And so with the protection of property and living on the river, there's controversy. And I think, before the [floods, the] controversy probably wasn't as strong....I think we can be good stewards to the water and the river ways but also [we can] protect our homes....Somehow we have to come up with a balance instead of just saying, 'Oh, you can't do this, and you can't do that.' Somehow we have to work together to come up with what is the best thing for the river and [the people]. (*Park County Residentialist*)

[After the flood was over] I said, 'Couldn't we move some of the rocks so the river would go back where it was?' [The Commissioner] said, 'The fishermen wouldn't like that.' I said, 'What is more important?' and he said, 'Around here, the fish.' Can you believe that? (*Park County Residentialist*)

The flood of 1996 took out Armstrong's Spring Creek. I was the one that said they couldn't do what they wanted to do. It was bad...Then it hit the press and they finally brought in experts. The landowner spent \$800,000 [on rip-rap] and it washed down the river in four days. I lost a lot of business because I stepped on the fishermen toes. They wanted it back at any cost. My family has been involved in stuff a long time and people hurt, because it was \$100 a day to fish the spring creeks. (*Park County Recreationalist*)

We have flood plain issues that are dealt with on a continuing basis....They are actually completing a study in the valley trying to re-establish the actual flood plain. It has been fairly controversial....[One set of designations affected] a lot more land area than what they had anticipated....The elevations weren't right and so it kicked a lot [of property]...into the flood plain and....nobody really wants to be in the flood plain very bad because you can't do any building or anything....On the flip-side, [an area] above Emigrant was in the flood plain [before] and when they redid [the designation] it was out of the flood plain....So, which one do you go by.....Trying to get flood insurance is a problem....They used the wrong formula...[but] they haven't really come back yet with anything new....The DEQ is involved, and the Corps, and FEMA as an insurance part....The interesting thing is the Corps of Engineers and the Montana State definitions of the flood plain are different....The boundaries...aren't the same....We don't really know [when they will make the final determinations]. It is still pending. I would guess within the next two to four years....Not having a flood plain [defined]...we have no idea what to expect from year to year, especially since we have been in a seven- to nine-year drought in this area. Water flows are much lower than normal and we don't have the flows like we used to

have in the '70's and '80's. In '96 and '97 there were back-to-back flood years. That was a 100-year and a 500-year flood....The biggest issue is the flood issue not being resolved. (*Park County Local Civic Leader*)

In the fall of 1997, then-Governor Marc Racicot, appointed a Task Force for the purpose of providing an official local forum for the deliberation of issues concerning the management of the river:

The Governor's Task Force...came together [because] we had seen a lot of bank stabilization projects without a lot of planning in my view. (*Park County Recreationalist*)

The Task Force worked for six years and submitted its final recommendations in the fall of 2003. The Task Force and its legacy continue to evoke much discussion in the local community.

An Involved Community—The Task Force and Its Legacy

Membership in the 1997-2003 Task Force varied somewhat over the years in terms of the particular people who served; however, local landowners and people with interests in the recreational resources of the river were involved throughout the years. Agency representatives also worked with the group. Opinions now vary as to the degree to which membership was representative of local interests and the degree to which the efforts of the Task Force were productive:

The Yellowstone River Task Force was formed because the local people here...are pretty recreational-minded. Fishing's a pretty big deal here in Livingston. They were trying to figure out, after the flood, what was the cause of the loss of the fish... That's how it all started, and then of course there was a lot of sentiment about building next to the bank, and there was a house that was too tall here, and they wanted to change the channels and stuff like that. And they were just trying to get a hold on the thing. They were just trying to prevent some of the things that have happened, which is not all bad. (*Park County Agriculturalist*)

It seemed like there were a lot of different interests [on the Task Force]. Maybe [they needed] a tighter agenda. They had people coming from all different walks and concerns. You have people that make money from it and guides and developers and you get the people that actually live there and have lived here for years. It got quite dicey at times and it got hard to stay focused on what the job was....Everybody had a different perspective. Very strong opinions and all different opinions. You can't put a label on anybody. There were ranchers, sportsmen, developers, environmentalists. They all had very different ideas. Their meetings would go until 2:00 in the morning. Everybody had to say what they had to say and they would go on and on and on. (*Park County Local Civic Leader*)

We've become a minority anymore it seems, and it's pretty tough. We don't have near the money that these other organizations can put together, and some of these battles get kind of tough. I know that when that Task Force deal was going, there were things said....They said, 'Well, the ranchers are on the way out, deal with it.'... I guess we're not ready to hear that. (*Park County Agriculturalist*)

The governor ordered a river study. One of our former commissioners was a member of that task group....They spent six years on it....They came out with a stack of stuff that deep....They talk about protecting this resource....They didn't want to armor banks and stuff like that. They want the Yellowstone to be free-flowing and let it meander where it wants. (*Park County Local Civic Leader*)

The time I spent on the Task Force, I enjoyed. Some [of the information] was way over my head and my education level. I have a whole stack of material, and I don't think there is a human being alive that could take that stack and make sense of it....They were all experts in their field, but we didn't have a person that took that information and put it into any kind of program.... It just wasn't gathered up...I don't know if there was anybody that could do it... When I listened to all the experts...nobody put the thing together, and they still haven't. (*Park County Agriculturalist*)

[The task force] was a waste of money. They told us where the ripples are, and...told us where the river floods. Anybody who's lived here for more than two years could figure that out without a PhD....I guess what bothers me about the task force is it comes back to the ranches should be the buffer zone....just let it flood over the ranch....Ag should not be the whipping boy....The sacrifices should not be borne by just the agricultural properties on the river, it should be borne by all, including the highways....Do we need to build a highway right along the river?...Or should we move the highway over a little bit [so we don't have to rip-rap it]. (*Park County Local Civic Leader*)

The Governor's Task Force...did focus a lot of attention on the riparian zones...[They brought attention to questions such as]...What are the alternatives of grazing management? And, what are the implications for riparian zones? What are the effects that riparian zones have on avian productivity?...[On] diversity and preservation of fish habitat?....There is more public awareness...than there was say ten years ago. There's an awareness that a lot of what we've done to the river is to diminish the productivity of the riparian zones. (*Park County Local Civic Leader*)

[The Task Force] was helpful because it opened people's eyes....Any publicity [showing] that we need to protect the river is useful. (*Park County Local Civic Leader*)

I did go to some of the meetings. I just thought they weren't really getting anywhere in the meetings....They weren't allowing the professionals to be a

participant and a voting party, so basically they had task force members, but a lot of the scientists and people that have the expertise, I felt, were not part of the equation. I mean, they came and they presented things, but [the professionals] weren't a voting mass....The scientists and the professionals...need to be participants in the Task Force, not just presenters. Because they are the people that know, and they should be the people that are helping this balance that needs to be met here. (*Park County Residentialist*)

There were tons of recommendations [from the Governor's Task Force] but I don't see where any of their recommendations were followed at all....The people...on there...did a good job....It's a sad thing because there's a lot of good-meaning people put a lot of time into that and really cared about what they were doing. Then to see nothing happen out of it is kind of discouraging. (*Park County Residentialist*)

You know, [the Task Force] didn't hurt....I know several of the people that were on it and some of them came away with a better feeling, some of them came away with a worse feeling....[The one's that thought it helped] felt they did some good and that the government was honest with them. The other group...[says] it's the old conspiracy theory, 'They used us.' (*Park County Residentialist*)

[Regarding the Task Force] I think...[they made good decision about] the flood plain and how the rip-rap was done to prevent erosion. Overall, there was a lot of good, sound thinking and they reached compromises. The health of the river came first and will be maintained. (*Park County Residentialist*)

Complications Near the River: Rip-rap, Setbacks, Mill Creek

In the wake of the engaged and prolonged conversations of the Task Force, residents of Park County offer a great diversity of opinions regarding the use of rip-rap as a method of bank stabilization. The diversity appears across and within interest groups. For instance, consider the differences of opinions offered by agriculturalists:

You need to use big rocks. You don't want to put in small stuff or it will wash away. It has to be done according to soil conservation specifications and all that. Big rocks on a bank are the best way. (*Park County Agriculturalist*)

Something that will work is hard rip-rap and barbs...None of that [soft rip-rap] has ever worked on the Yellowstone. I can see where it might work on a river or stream that is not as violent. (*Park County Agriculturalist*)

I think every time man decides he's going to manage nature, he normally screws it up royally. (*Park County Agriculturalist*)

Erosion [happens] on the banks...which is too bad....You hate to lose areas of the ranch, but [if you] put structures in the river, and try to push the river over, you effect somebody else. So it's a no-win deal, really. (*Park County Agriculturalist*)

I just think that there needs to be some careful planning....when stream bank stabilization is done to make sure that you are protecting your property but not jeopardizing someone else's. (*Park County Agriculturalist*)

They have almost shut down any bank stabilization....I should do some bank stabilization but I don't know if I have it in me to take the guff that it is going to take to get it done. It is tough to have to do battle....I just dread it. (*Park County Agriculturalist*)

All my father-in-law used to do is talk to the [Conservation District] and the Army Corps. They used to design the project for you, but they don't anymore. (*Park County Agriculturalist*)

Well, it's going to take some time and you have to kind of get ahead of the curve. If you've got a certain time schedule....you have to get started, [but] like I said, we found them very reasonable. (*Park County Agriculturalist*)

The banks have to be stabilized, and we have had to do quite a little of that since we've been here—thirty-seven years. But we've always had good cooperation from the Bureau of Army Engineers and the...Fish and Game and those [in the] conservation services. I think they've treated us fairly....We've always left some riparian area there along the river. We never graze that real hard. There's always a lot of grass and brush and things like that, and I think that's probably one reason we've always been able to get along with the Fish and Game and the Bureau of the Army of Engineers because we've always tried to leave the riparian area there next to the river. (*Park County Agriculturalist*)

We had to haul rock in, probably 85 percent [of what we used]....Maybe even more than that, maybe 90 percent. (*Park County Agriculturalist*)

We counted them. There were thirty-one different representatives from different agencies [involved in our project]....We had an engineer that should have known we had to re-apply, and he didn't even know. (*Park County Agriculturalist*)

Local civic officials and residentialists also offer a variety of opinions regarding rip-rap:

You do have to be careful when you rip-rap because you may protect yourself but you are pushing it to someone else....[and] pretty soon you would have a big channel if everybody rip-raps. Once you let one person do it, you start the problem. (*Park County Local Civic Leader*)

I don't know that there is a whole lot you can do [about erosion]. The river starts to move and...you can plant trees. That is probably what is holding the dike together right now. Tree roots are a great thing. (*Park County Local Civic Leader*)

There is only a certain amount of [stabilization trees will] do. You try and get willows started in a sand bar...sometimes that works and sometimes it doesn't. (*Park County Local Civic Leader*)

If one person rip-raps, the next one does, all the way down. It speeds up [the river]. They don't want that constriction....On the flip-side you have the landowners...that are subject to the whims of the river and that is their property that is being washed into the river when it creates a meander. It was kind of ironic during the course of that study that there was a house that was on a 100-foot high bluff, about 500 feet back, and during the major floods it undercut the bank so much they torched that house before it went in [the river]. It was pretty dramatic. It was even more dramatic the way the banks fell off....[The house] was on a big gravel slope....The river was so high it kept washing away that bench. It just gradually eroded that thing back hundreds of feet. (*Park County Local Civic Leader*)

I would like to see some better science on the effects of hard armoring and rip-rap on the...fish production...[and] habitat areas [such as those created in] flood stage....We've lost a lot of that. (*Park County Local Civic Leader*)

I don't know, at this point, what you can do other than encourage responsible planning...and really being careful if you allow somebody to rip-rap. You have to think about the consequences...Some of the biggest problems here are these old bridges that constrict the river. They need to redesign those bridges, of course it would be millions and millions of dollars. (*Park County Local Civic Leader*)

After the flood, they built concrete all across the front of the house up to this floor. Then they put the huge rocks in....It is [a] concrete wall...[and] there is the barb. I am pretty safe. It was nothing like this before....They are saying you shouldn't rip-rap, but this is my home. The engineers will allow me to repair this....If anything happens, they will let me fix it. I am grandfathered-in. They will let me do that. (*Park County Residentialist*)

[Rip-rap] can divert water. It can shift the problems up or down....The reason that I probably might not do the rip-rap is I'd lose ten years of vegetation that's out there since the last flood and the vegetation is as good or better than hard rip-rap...[and] once I talked to some people who explained that to me, I don't really want to tear it up to put some rock in...but [the information] didn't come from any of the [government agencies.] (*Park County Residentialist*)

I was interested in one technique [to prevent erosion.] I saw on a ranch that used root balls along the river to start collecting rocks to start building the bank up

again....It is a natural form of rip-rap. I saw some of that and was interested in that although when you call somebody that does that natural stuff it costs a lot of money. I don't know if I have that much to put on the bank of the river. (*Park County Residentialist*)

The recreationalists are the most uniform in their concerns regarding rip-rap. They typically view erosion as a natural process, and they regard the free-flowing character of the river, along with flooding, as serving important riparian functions:

We have a little erosion every year...There always will be some erosion inevitably. (*Park County Recreationalist*)

The '96 and '97 [floods] were so refreshing, in many respects, because the river was just huge and nobody had ever seen it like that. And it was rampaging all over the place and doing wholesale channel changes down there in Livingston. (*Park County Recreationalist*)

There was a time when a property owner was at a loss but to just accept the influence of the river and they just accepted it....I guess there is a certain communion with owning the land and understanding how it works and knowing you take the good with the bad. The river changed course and I lost that bottomland but at some point I will regain it. It might not be my generation; it might be through my kids. (*Park County Recreationalist*)

Do you rip-rap the south bank and leave the north bank natural? It is a slippery slope. Once you go there it exacerbates itself and it changes the ecosystem and there is no going back. (*Park County Recreationalist*)

One of the saddest things about the Yellowstone is you go down between Hysham and Forsyth and there are some of the most incredible cottonwood forests you have ever seen. I would assume it was here too. That is the problem with rip-rap: you get the floods coming over the top and they don't get re-seeded. (*Park County Recreationalist*)

It's not great for riparian areas when you have a rip-rap bank. That wrecks it. (*Park County Recreationalist*)

When you channelize the river, it takes away its wild characteristics....but every time you stabilize that bank, you tame the river more.... the Yellowstone isn't allowed to spread out...it stays in one channel and it just digs a big deep trench over the years....a lot of people think [rip-rap] provides great habitats for fish [but]...the fish studies that have been done have documented that surprisingly the [smaller] fish aren't there like they thought they would be. (*Park County Recreationalist*)

The Yellowstone left to its own devices would take care of itself because it is a wild river, but if you continue to rip-rap it...it can't handle that amount of rip-rap. The river goes where it needs to go, and when you change it, it doesn't just affect the flow, it affects many, many things ...It reaches a saturation point. (*Park County Recreationalist*)

The topic of setbacks also comes up regularly amongst the people of Park County. Again, opinions vary:

About four or five years ago [some people] wanted to have a 500-foot setback. That got everybody's attention in a hurry. So we soon shot that one down. [With that setback] you couldn't have done any rip-rap, and you couldn't have done any stream stabilization, and you couldn't do any capital improvements unless you [had] the approval of the group. (*Park County Agriculturalist*)

People have wanted to put setbacks in place on the Yellowstone to keep development away from the Yellowstone River. I think they talked [about setback of] up to 300 feet, maybe, from the Yellowstone River. I think the setback now might be 100 feet. But that's one issue that has come up that people bristled-up a little bit over. I think the landowners themselves would probably be most content with no regulations, but people who float the river, maybe they want some regulation. (*Park County Agriculturalist*)

I feel strongly, if I'm in harm's way, it's my fault and I'll have to deal with it. If they want to pull my insurance that's fine. I have the means to survive somehow. But I think if you do live in harm's way, regardless of wherever you are, you have to be smart. (*Park County Agriculturalist*)

[Set-backs can function as] a public safety component, and there's also a river health component. You don't want to be in situation where you see...concrete sides and sedimentation runoffs in the river? So far, this river system has been fairly resilient....there is a fair amount of seasonal rehabilitation that the river does for itself, but that's limited in terms of capability, and it's hard to know what the limits are without bumping up against them. (*Park County Local Civic Leader*)

We will listen...and advise....We look at hydrology, [to see] if it is...in a hazard area. We have regulations about altering the flood flow or armoring the banks or putting fill in. We look at all these things. The best thing we can tell them is, 'If you get near the river, you will get your feet wet.' (*Park County Local Civic Leader*)

From a recreational stand point, how many houses do you really want to see sitting on the river bank as you go floating by?...That is a resource quality that we take for granted, but it's not necessarily going to be here 20 years from now. We're seeing an awful lot of development right along the river and...I think that

effects property values long term, it degrades property values. And it certainly degrades the marketability of the fishing experience for a lot of the river guides. (*Park County Local Civic Leader*)

If we're not careful it's going to look like a bunch of squatters all the way down [Highway] 89. All the way along the river, it's going to be ugly. (*Park County Recreationalist*)

These people have built beautiful homes. They're not junky. They're beautiful but there are too many, too close to the river. (*Park County Recreationalist*)

We have a cabin here that we rent to people. And every once in a while my husband will say we should build a couple more and I say, 'I will not....that's more sewage on this small plot.' That's not being a good steward of the land that we've been given. (*Park County Recreationalist*)

Have those homes set back from the river...this was the last best place in Montana and it's been discovered, so you've got to have rules. (*Park County Recreationalist*)

This county is going to be subdivided. There's not any way of stopping that, but I think we should have 200 foot setbacks on the river both for the houses and for the septic tanks and drain fields. (*Park County Recreationalist*)

How do you set an arbitrary 300 or 500 feet? It has no bearing on the river. We have a 300 now....These arbitrary lines don't make sense...They have a 500 foot in Madison Valley but they seem to give exceptions all the time...If you think of how different rivers are, you need to do it by reach tide. (*Park County Recreationalist*)

[Setbacks,]...That should be an easy answer but it isn't....we are concerned with the function before the aesthetic wants....Knowing that in some areas there may not need to be a setback at all. In other areas there may need to be 500 feet or half a mile depending on what you want to maintain. As you come to the lower end it meanders a lot more. At the upper it is naturally armored and doesn't meander as much. Since we are heavily dependent on tourism the aesthetic qualities are very important for the floater and the fisher people. (*Park County Recreationalist*)

We need to be looking pretty seriously at why we're still allowing homes to be built on the river. And...I'm kind of speaking out of two ends here because I do live on the river, but I do think that since the floods we need to look more seriously at what we are allowing....Each place wants to protect their property....Are we all going to be able to do that and still allow the river to be healthy? (*Park County Residentialist*)

It will put more people on the river. It will impact the visual aspects of the river. I think there should be setbacks from the river, for aesthetic problems and pollution from septic tanks. (*Park County Residentialist*)

The latest the efforts have been a lot about growth....They've been trying to work on the growth policy and the subdivision regulations....So that there are setbacks from the river. And Park County Environmental Council is definitely behind setbacks, and I agree. I agree that new building needs to be different than the old....It shouldn't be that we say, 'Well, you live like that so why not [the next?]'....You know, things change. We need to be better stewards because there are a lot of us. (*Park County Residentialist*)

We're going to get more regulations....And, of course, you have all sides....You get the guys that say, 'They are taking our property rights.' I try to tell people that what you do [on one side of] the road sometimes does affect the other side of the road. They don't like to hear that, of course, but we have to be honest....It's the conspiracy theory, the government's-got-too-much-control theory. I get a lot of that here. (*Park County Residentialist*)

Another concern involves water rights and the seasonal conflict in late summer between irrigation needs and recreational resource needs. Some of the participants from Park County wanted to discuss concerns about Mill Creek:

Mill Creek...has a significant drainage area. Through the Conservation District, they've developed a lot of pivots and irrigation systems...[and the farmers] have taken quite a bit of water. The fisherman and the recreationalists are upset because generally that creek will run dry in the lower end, below where the big head gate is, [in] mid-summer....Fish and Game want to restore the cutthroat fishery, and they don't know quite how to do it. They can buy the water, [but] at what cost? I don't know what they arrive at, but there's a conflict [between] recreationalists—the new second-home people that moved up there—and some of the older, traditional agricultural water users—primarily ranchers, and alfalfa [growers who]...use the water for their livelihood. I understand the need for maintaining some water flow...[and] there is another approach....That lower section is just going to run dry at certain times of the year....When...the small fish get to a certain size [upstream], they'll flush [the creek] for three or four days....Open that up and blow all those little fish into the river. But that's expensive, they have to pay for that water, and there's some concern about fire [in late summer]....Having that water is pretty nice...when you're worried about fires. (*Park County Agriculturalist*)

We're going to have a leasing meeting over on Mill Creek with the watershed group next week, and a lot of people are feeling that they're coming up short because [one guy is] leasing his water rights [to provide for the fish in the creek]. It is going to effect me, but we have a law that says, if it's beneficial use, you can do that....Fish and Wildlife is beneficial according to our legislature,

now....And, let's face it, I'll be the first to say, that sometimes the fish in that creek are worth more than the hay I'm raising....[Most people] got their irrigation systems put in by the government—not totally free, but with lots of grant money—that was ten years ago....[Now, with this guy leasing his water, another] says, 'It's not fair.' Well, it may not be fair, but you did get a new pivot...for half-cost....So, I don't know. It's tough. I mean, that's going to be a real contentious meeting....We have water rights, but we dry up Emigrant Creek every year. So I can see both sides. But sometimes I [ask about the] outfitters and how much money they make on the Yellowstone River—it's tremendous. (*Park County Residentialist*)

Observations from the Veteran Community

Because they have gone through prolonged discussions of how best to manage the river's resources, many of the participants from Park County see themselves as veterans. The local deliberations have not necessarily resulted in consensus decisions about what should be done, yet many of the Park County participants offered advice concerning how communities should approach complex issues. For instance, even though particular individuals may feel threatened by change, taken as a whole the community understands that traditional activities will have to be balanced against new demands. A new type of stewardship is emerging:

I think you're always going to have your contrast between people whose interest is progress, and those that want to save [the valley as it is]. It's an on-going thing. (*Park County Agriculturalist*)

Part of our stewardship is to make sure....I mean, let them come, let them see, but [don't ruin the valley]....There's a rancher-gentleman in the valley...that made the statement, 'In twenty years, US Highway 89 [will] be solid strip malls.'....That's his fear. He's lived here [and] he's managed the same ranch for twenty-some years. His father managed it for thirty years prior to that. They have been in this valley for a long, long time, and that's their fear. That is their tremendous fear. (*Park County Agriculturalist*)

What resonates from both sides...is water quality....[But what is] water quality? Is it simply the chemical analysis?....Or is water quality [connected to] the system?...If you started from water quality, and worked gently outward...describing the mountains that create water quality, then there may be an incremental way to bring people into consensus. They [need to]...fundamentally understand why this water is good and why it is bad. Start from why is water so important to us. It may sound elementary. (*Park County Recreationalist*)

I think there are some people that want to see the agriculture survive just for the benefits for wildlife. They could see the handwriting on the wall, that there are

going to be more and more homes built, and habitat for wildlife would become a premium. (*Park County Agriculturalist*)

I think in the long run it would be better to support Ag, even from [the newcomer's] standpoint. Ag is what the people like about the valley now. (*Park County Agriculturalist*)

My big thing is the public access and the public's right to use the resources and enjoy the wildlife....Most of us live here because of what the outdoors has to offer....We just really need to safeguard that. (*Park County Residentialist*)

I think the river is threatened. We have rules, but we are only [a few] eyes up and down the valley. If it weren't for a lot of caring people, and a lot of snitches...[we couldn't do our job]....We need to update our regulations. We need to look at them and revisit them, and make more people mad at us. (*Park County Local Civic Leader*)

As is true with many Montanans, Park County participants are certain they do not want too much governmental oversight, especially if it comes in the form of arbitrary rules:

I don't like legislation because it seems to be arbitrary. I don't see any flexibility, either you do or you don't. It's like this house. We were grandfathered in, and we're living where they lived for almost a hundred years, and yet there are a lot of people who object to our living over here. (*Park County Agriculturalist*)

It isn't that we have to change it or protect it to death. We need to maintain it and respect it. I hate to say it, but the usage is going to have to be limited. You can't just send 200 boats a day down that river. There has to come a point, like with the Smith River, it will have to be limited or on a permit basis....You will have to be a resident, and they will give out so many non-resident permits....I don't know what the answer is, but we have to do something to change or we can forget it. (*Park County Local Civic Leader*)

The public, and myself included, we need to have some available information....We [weren't] really good stewards when we moved here. We've done some rock work along our bank, and there wasn't anyone there [to advise us]...unless we could have paid for professionals....But at the time we couldn't afford it....If there's some kind of grants that may be available so you can hire a professional—if those professionals really have the answer—that's a question...I have. (*Park County Residentialist*)

Don't be too hard on the people that live on the river. I don't have the money to make big changes....I had a bunch of cottonwoods growing and the beavers came and ate every one of them. There went my stabilizing....[The beavers] are really destructive. I am trying to keep this place,...[even though] the moose come and

they eat everything they see and...I am not going anywhere. I am going to stay here. (*Park County Residentialist*)

Private property rights are considered very important, even when this means letting people make mistakes:

I think that people have to understand that private property needs to be protected. Without any property rights protection, agriculture as we know it is going to fail, big time....There are areas on the river where the river has a solid bank and no amount of high water is ever going to erode it...[In other places] I think that...people have to be first. (*Park County Agriculturalist*)

You do the best you can. People have the right to live where they want to live. I think there is a growing awareness that [rules sometimes] change. It is tough to deal with, but just making the people...more aware of the problems that we all face, and having them taking some responsibility...[will] help make that change positive instead of negative. (*Park County Local Civic Leader*)

It's difficult to save people from themselves, so I think that one of the most important things a governmental entity has to do is persuade rather than demand. And I think that's where the involvement in the decision making process is critical....You have to be open and receptive to public comment—you have to be empathetic without necessarily having to agree. And I think in the instances when we don't agree, you have to convey [that you are] understanding without necessarily being in agreement....The Corps, in the past, has not been as sensitive as they might have been in terms of conveying to the public that they are listening, not necessarily agreeing....[With] set-backs, you're trying to save people from themselves—it's a very hard sell. (*Park County Local Civic Leader*)

Private property rights are always an issue along the river. They often are trampled on by regulation and then those regulations cost the private property owners along the river money....There is always a balance and to find that balance and for everyone to be responsible along the river...I think that's done through education not through regulation. (*Park County Residentialist*)

It is certainly true in Park County that a call for public participation is not ignored. Those who participate in and who organize such efforts find themselves involved in intense conversations. The outcomes are seen as potentially negative and positive:

[In this] culture...nobody sweetens their tea. It's the attitudes. It is a very self-reliant culture....[an] everybody-takes-care-of-their-own type of culture. The view of government out here is not just suspicious. It is flat out distrust. If government is involved, something is wrong....In other communities they at least give you a chance to screw up. Here they assume you already have and they haven't found out about it. (*Park County Local Civic Leader*)

You can't impose your ideas. You need to involve everybody and all sides. The difficulty is...all sides feel threatened....A good process has to be inclusive and usually that is tedious and difficult to do....The hard part is paring away the rhetoric and getting down to what it is you actually value, and what threatens that. Not your fears, but the reality. It's really hard to...trust people enough so you can actually talk about the real issue. (*Park County Recreationalist*)

The squeaky wheel gets the grease. If you want to have something done you've got to make some noise. It's good to think about doing it the right way. It's good to understand the process. I just think your average person doesn't understand the process. They don't know how to go through it. (*Park County Residentialist*)

Some of these people don't take no for an answer. Now, developers come and bring a staff of lawyers, hydrologists, engineers....They will come to the planning board meetings with their attorneys. They will set up their own sound systems so they can record everything. This is a kind of intimidation where they will sue you if you don't do something they want, 'We are recording every word that you are saying.' They have a whole entourage of people working for them, and you are one person, trying to do the best for the county, and you have to face their staff. That is how they are now....They will hire their own stenographers for meetings. They will go to the commissioners meetings when it is their turn to decide something. They intimidate....First they will try and schmooze you. They will put on a luncheon. If that doesn't work, they will get tighter and angry. Then come the lawyers. (*Park County Local Civic Leader*)

All too frequently we are ready to find the differences...I think in my mind there is a bond between the ranchers and the environmentalists but socially they can't find it. (*Park County Recreationalist*)

Montana is interesting to me in that it goes beyond public information and public comment to public decision making. Folks don't just expect to know what is going on or have access, or be able to make comments, they expect to be seated at the table with the ability to put their hand in the air and cast a vote. I appreciate the interest that people have. It can present challenges if a lot of people feel like there has to be a consensus before a decision can be made. That can be difficult. (*Park County Local Civic Leader*)

The largest input should be from the local people and what they want...because each county here has different circumstances....Even though you have a lot of similarities, each one has their own uniqueness. (*Park County Residentialist*)

I would like to feel like somebody's listening to me because I live here....I care about it and...I want to see it still be here for my grandchildren and generations to come....God gave me this [to me] and he made me the caretaker and this is my job. I don't do it for money. I do it because this is my job. (*Park County Residentialist*)

One consequence of lengthy deliberations is that the role of government is both appreciated and decried:

Everybody's a little leery about some [governmental] program that's going to leave an agency being married to them. So that's one fear that certainly a lot of us have. (*Park County Agriculturalist*)

The ranching community has had an aversion to any zoning or control and I think that mindset has prevented a lot of these things from happening. I think that is changing but they just don't want any more regulation. (*Park County Residentialist*)

I wouldn't have found out [about the new flood plain maps] if a landowner hadn't contacted me about what they had come up with. You know they didn't send those flood plain revision maps out to us. (*Park County Agriculturalist*)

It is amazing [that] only one-half the county is zoned. You might buy a piece of property and create a nice place...but your neighbor could create a gravel pit. You get a lot of conflicting land use because there is no zoning. People fight [zoning] because they want freedom to do what they want with their property. (*Park County Local Civic Leader*)

When something happens out there and they come and say, 'Can't you do something about it?' And we say, 'We have no regulations.' We just need to balance regulations and rights....Right now [the community is] so anti-regulation....[but] we need more effective regulation. We need rules...that have some teeth. The things that are in place...we need help enforcing. You are talking 2700 square miles, 14,000 people, and [a very few people to watch] the rivers, subdivisions, and drainages....If we didn't know people as well as we do, we would have a hard time. (*Park County Local Civic Leader*)

People complain about their neighbors, and we referee....Sometimes they can get a lawyer and sue. There are not a lot of regulations, and we can't go out and wing it....We refer to the County Attorney to see if it is something we can pursue. We can't make up our own rules. We try and do the best with the rules we have...[We try to] not appear to be heavy handed, but not appear to do nothing. (*Park County Local Civic Leader*)

Our old maps are terrible to use and the new maps with elevations and overlays on aerial photos are so wonderful to use. What little we have been able to use them has been very helpful....[The maps] have to be accepted by the commissioners, and then they go to DNRC...then to FEMA, and then they have to review and put them on a rate map to drive the flood insurance. Some of the meetings that are scheduled for approval are [scheduled] for 2008....It has gotten political. They have talked about moving the flood plain and it is a big financial burden on those people. (*Park County Local Civic Leader*)

I think at some point the government is going to have to be willing to step in and help the landowners along the river. That land has value, but it has value for many different possibilities, not the least of which is wetlands. The flood plain is what lets the river spread out during these floods. I think that there is going to have to be some programs where the landowners get some compensation [if they] allow the river to go where it wants to....And it has to be in the same context as if they are raising a crop. It has to be a long term agreement [with] the landowner, be it a rancher or a farmer or someone who bought in for aesthetic purposes. They need to be compensated. I don't know any other way to do it. The local landowners...don't have the means or the money to just donate that. That is what they are being asked to do now. That isn't right. (*Park County Local Civic Leader*)

[Our former] planner....noticed the local people don't like the local people telling them what the regulations are, but if it comes from the state or the federal government they are fine with that. They don't want a local official bossing them. They feel [the local official] could be more biased than a state or federal agency....We get it constantly....If I can say, 'I have to administer [this way]...it's from FEMA and I don't have a choice'...then they say, 'Oh, okay.' (*Park County Local Civic Leader*)

Yet, in spite of not always generating consensus and in spite of the many complications and disagreements that public forums generate, many people from Park County accept and engage public deliberation as an important right. Of late, some people are involved in the watershed groups sponsored by the Park County Conservation District, others are more generally committed:

I'm involved in the Upper Valley Watershed, and they're trying to do some stuff with ranchers. They have education for the people that are involved in it, and yet everybody that's in that watershed are all in the same group. So everybody is welcome to come to those. They get to hear from both sides a lot of times. I think there has been a lot of good that comes out of those watershed groups. (*Park County Agriculturalist*)

Not everybody sees things the way I do. But...it's good to have different opinions too, because that's how you get problems solved. You can't have everybody agree on everything. You need to be able to have good healthy arguments about things and hash out the details. (*Park County Residentialist*)

The most important thing is to be proactive and not assume that problems will solve themselves. The only thing that happens with that passage of time is the two sides of the issues become more concrete in their positions and less willing to look at the common elements of interest. So if I were to talk to someone in a county that's maybe twenty years behind where we are in terms of growth...[I'd say] start from the perspective of trying to determine what values are generally

held in common by the whole community. Work with those commonalities and keep the focus on the commonalities...It won't [necessarily] prevent the polarization, but it will certainly keep people focused on avenues to solutions that recognize commonalities. (*Park County Local Civic Leader*)

[We need] some common ground where people could realize that the river is the most important....Hopefully it doesn't take something really bad to make people realize, 'Hey we need to help this river.' Usually by the time things are bad, they're really, really bad...[and] can't be helped, so hopefully it doesn't ever get to that point. (*Park County Recreationalist*)

In sum, conversations from Park County suggest that in a few short years a community can learn a lot about how the river works and about what is at stake when authorities impose rules and regulations that impede the actions of private citizens beyond the customary limits. It is obvious that such community engagements do not necessarily engender consensus opinions about the rules. Nor is the work of the community ever truly completed. New problems and evolving situations will constantly require the development of new information, new management strategies and new commitments from the people of Park County.

Springdale to Gardiner: Agricultural Interest Group Overview

Interviews were conducted with fourteen individuals representing agricultural interests, including farmers and ranchers. Participants were recruited from referrals provided by the local Conservation Districts, the Yellowstone River Conservation District Council and the Montana Office of Natural Resources Conservation Service.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|---|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Springdale to Gardiner: Agricultural Interest Group Analysis

I. Specifics of An Agricultural Perspective

A. Lifestyle and Way-of-Life

Our family likes this lifestyle. And I can keep my kids out of trouble by providing wholesome activities and a lot of good hard work for them. It's what I do. I've always farmed and ranched, and this is what I like to do. (*Park County Agriculturalist*)

The lifestyle—the view and the freedom—is what keeps me here. I've been self-employed my entire life, and I hope to always be that way. I couldn't be any other way. (*Park County Agriculturalist*)

There is a relationship that forms working with the land. You learn to love it, and it becomes part of you. It becomes part of your character. It has some very formative influences on who you are. It becomes part of your soul. I think of the legacy and the heritage. Our kids understand that formative influence on their character. This place defines who they are. (*Park County Agriculturalist*)

Part of the reason for locating here was the river. I like rural areas. I like the outdoors. And I like this area of Montana and have the means to live here. (*Park County Agriculturalist*)

Some of the people have told me, 'You are never going to win against the river,' and I think that is probably true. As an agriculturalist, I don't deny that that is going to happen. Mother Nature is cruel, tough, and hard. If I didn't do anything because I was afraid my crop would freeze or flood then nothing would get done. You gather up and do the best you can, and you might fail. She might cut you down. (*Park County Agriculturalist*)

I value the people who live here. I value the natural beauty of this area. I love the river and the recreational opportunities, less so then when I was younger. It's a nice place to raise kids. (*Park County Agriculturalist*)

B. Rural Ideals

If it weren't for the farmers and ranchers, this valley wouldn't be so beautiful. It's the river that keeps the valley beautiful because it subsidizes the farmers and ranchers by supplying the water. (*Park County Agriculturalist*)

Agriculture keeps the land out of development. For one thing, Ag is a big contributor to our economy in the state and the country. I'm real pro-Ag because I think this country is

founded on natural resource based productivity: mining, timber and agriculture. (*Park County Agriculturalist*)

I think it's important to be able to continue to use the water from the Yellowstone. Our livelihood depends on our water rights from the Yellowstone River. That's a pretty important issue to me. Then I think keeping the wide open spaces is important. Because without cropland, we'd be out of business here....Instead of mowing hay, we'd be mowing lawns. (*Park County Agriculturalist*)

The river is a beautiful resource and I really value nature. I value the animals. I value the birds—we love to see the birds. But they are all impacted by people. You know, we tend to love things to death. And there's just a hell of a lot of people that have moved here and enjoy those things, but it changes—you don't find solitude on the river anymore. And that's an important word I should put in there. I value the ability to go down and be in the woods and sort of get away from the maddening crowds. (*Park County Agriculturalist*)

I don't think we should say, 'Ok, Joe, Sally, and Alice own four miles of the river so we have to let them do what they want.' No we don't. (*Park County Agriculturalist*)

On this place, I love it here. And I would never do anything to hurt it. It is my job to be a good steward. And I don't need some conservation easement to encourage that. (*Park County Agriculturalist*)

I do have an obligation, there's stewardship in ownership. You never really own anything on the river. I do believe strongly in private property rights, but in terms of ownership it's a fleeting thing, it just changes hands. (*Park County Agriculturalist*)

My sister and brother-in-law, it seems with impunity, sold that place next door. They never worked it. They always hired help. That relationship with the land can't happen unless you become physically involved in it. It is not just ownership, it is actually working it. When they sold it, it broke my father-in-law's heart. We brought him up here and he looked at those buildings and you could see the tears rolling down his face. It broke his heart. He had worked so hard all his life to give a precious gift to his children. What an insult that was. They have no soul. (*Park County Agriculturalist*)

Agriculture is such an important fundamental industry in the world for us today. There are people who talk about production agriculture as a thing of the past. What a crazy notion. I can't see how we would become more vulnerable. That weakens our security. The safety of our food supply is in jeopardy if we depend on foreign agriculture. Listen to people squawk now about foreign fuel. This is an industry that is so vital to our security that I think there needs to be public responsibility to keep it healthy rather than challenging it and making it more and more difficult for us to make money. I don't take a dime off this ranch. I am living on my retirement because I am trying to see this ranch survive. (*Park County Agriculturalist*)

C. Individual Rights are Important

I don't really feel like being told what to do by a bunch of fishing guides. The reason we're here is because we like the independence, the open space, and the freedom. (*Park County Agriculturalist*)

I think that people have to understand that private property needs to be protected. Without any property rights protection, agriculture as we know it is going to fail, big time....There are areas on the river where the river has a solid bank and no amount of high water is ever going to erode it...[In other places] I think that...people have to be first. (*Park County Agriculturalist*)

D. Water Conservation—Water Quantity

I think there are some things that could be done, not particularly to the Yellowstone, but to the tributaries of the Yellowstone to conserve water so less water would need to be taken out of the Yellowstone. We have several streams on us, [and] if we were allowed to dam up the stream to build up a reservoir...there would be less water drawn from the Yellowstone....Most of [our] water would be [drawn from] the reservoirs [that] would fill up during run-off time. (*Park County Agriculturalist*)

We need some off-stream storage. We need to preserve some of this water. There's times when this river runs [very high]. And the climate is changing, we know that. And the run-off is coming a lot quicker than it used to. It used to be the river held up until August, as it is [now] it starts to go way down in the first of May, June and July. (*Park County Agriculturalist*)

I think that we're going to...use water more intelligently. Pivots are very effective, and they don't use the amount of water that we used to use with ditches. But when we flooded these valleys with flood irrigation, that charged the aquifer and the system. There were some advantages to that and we're loosing out. (*Park County Agriculturalist*)

People don't realize how important it is to [flood irrigate]. I mean, you can figure that as water storage, too. Of course, [whatever] help [was gained is gone now] because they wanted us to...economize the uses of water [by using] sprinklers. (*Park County Agriculturalist*)

They [might] need this water for a municipality, or to put a coal-fire generator plant down here at Roundup....Every gallon of ethanol...takes two gallons of water. So the usage of water is going to change. That's going to have a big bearing on who sells out and who is forced to sell out. (*Park County Agriculturalist*)

The only thing I really want to stress is that somewhere along the line they're going to have to take steps to increase our supply of water....When we had that oil embargo back in 1973, and you know how panicky everyone got when we didn't have a supply of oil,

what would it be like if we had a lack of water to grow our own foodstuff and we have to depend on some third-world country for our foodstuff. (*Park County Agriculturalist*)

II. Agriculture's Viability in a Developing Area

A. Threats to the Viability of Agriculture and the Choice to Sell

It's becoming harder for agriculture because land is worth so much, [and] the tax values are so high, and yet the production doesn't go up. (*Park County Agriculturalist*)

Property along the Yellowstone River, in dollars and cents, is worth ten- to thirty-thousand dollars an acre. That is not an agricultural value. I have three miles of Yellowstone River frontage. It is covered with cottonwood trees and brush. The value that I put on it is that I use it in winter for cover for stock. In spring, it gives the calves some protection from spring storms. (*Park County Agriculturalist*)

The agricultural value is anywhere from \$150 to maybe worth \$500 to \$1500 an acre [for] irrigated ground. It is amazing. We just went through an appraisal for IRS. In going through an IRS appraisal you look at a highest and best use. It isn't agriculture. (*Park County Agriculturalist*)

We've looked at our inputs, such as fertilizer and fuel going up a third or more in one year. That's a pretty big hit for a small business. We don't have anyone to pass that along to. Our prices are pretty much set. We sell at what the market offers us. And in a business where the margins are pretty slim, it makes a big impact. I don't know how long Ag will be viable. (*Park County Agriculturalist*)

We're sitting on a gold mine and starving to death. (*Park County Agriculturalist*)

There is no financial reason to ever not sell. Working seven days a week...that isn't what makes somebody's day. (*Park County Agriculturalist*)

You got grassland here that takes forty acres for one cow. It doesn't take long to realize that there's not very much money in it. Some people struggle as long as they can and then sell their property....It's just economics. (*Park County Agriculturalist*)

This land won't sustain. You can't buy land and raise cattle on it—nothing on the river bottom, unless you're grandfathered. So viable agriculture will not be what it is. There are areas further east toward, Glendive and Miles City, those are still viable areas. (*Park County Agriculturalist*)

Real estate agents, greedy real estate agents, people looking for money, are responsible [for subdividing the land]. You usually don't see the farmers selling directly for a subdivision. They will sell to someone else and [the new owner] will subdivide it. It winds up being sold to a developer. Most of the local farmers and ranchers won't subdivide. Someone else is doing that. (*Park County Agriculturalist*)

B. The Changes Associated with Development

There used to be sixty-five or more different ranches in this valley. Now there are probably fifteen, and the population along the river here has increased dramatically. (*Park County Agriculturalist*)

What is happening here, along the river, and the influx of people that are here, is what happened in Colorado one hundred years ago. And it happened in Texas two hundred years ago. That's what I think is the most precious thing about the river, there's not much of this part of the world left. Very little of it. (*Park County Agriculturalist*)

We've done some projects where people objected to what we were doing. They didn't like to see our equipment parked in their view. They didn't like the dust or the noise created by farm operations. (*Park County Agriculturalist*)

It's getting harder and harder just to move your equipment up and down the road. We've got a 70 miles-per-hour highway out here that we [use to] move a lot of equipment from one farm to another, and it's getting hard to transport equipment. It's getting harder to move cattle. It's getting to be a busy area. (*Park County Agriculturalist*)

Moving cattle on the highway...we don't do too much of that, but we help neighbors and that has noticeably become more of a problem. It used to be that people that came up would visit and slow down...[Now] we get people that get mad, and we have had some close calls. That has noticeably changed in fourteen years. Now we have a flagger in front and behind, and flashers. It has kind of become dangerous. There is more traffic than there used to be. (*Park County Agriculturalist*)

There are some silly, thoughtless things. I see little ponds and things impacting the areas. I've seen people put ponds where there's no reason to put them. It's their rights to do it, but I don't have to like it. (*Park County Agriculturalist*)

When they start subdividing, all this land that was...flood irrigated at one time, you're taking the storage capacity out of that aquifer. (*Park County Agriculturalist*)

We've become a minority anymore it seems, and it's pretty tough. We don't have near the money that these other organizations can put together, and some of these battles get kind of tough. I know that when that Task Force deal was going, there were things said....They said, 'Well, the ranchers are on the way out, deal with it.'... I guess we're not ready to hear that. (*Park County Agriculturalist*)

C. Outsiders Have Obvious Wealth and Different Values

There is a very wealthy man who lives up the valley....He called us and said anytime we are ready to sell the ranch, he had a blank check in his desk drawer. It was an insult. It was just money. They knew nothing of the heritage. Nothing of the lifestyle... You can't sell who you are. (*Park County Agriculturalist*)

Absentee owners litter the land with houses, and then they don't use them. I don't have a problem with [a new house] if it's being used, they're not using it. (*Park County Agriculturalist*)

I think with the number of outsiders moving in and buying property does change the political culture here. They have more money...[and] more time....They seem to be able to organize more readily than ranchers do. A lot of the newcomers bring their ideas with them. (*Park County Agriculturalist*)

A lot of those homes, I'd say quite a few of them, are second homes. I think that the people that live in them don't have the ties to the community and so there is, to some degree, a little resentment. I don't think it's class, it's a wealth issue. (*Park County Agriculturalist*)

As more homes spring up, we have to be careful with high powered rifles—that's a liability. We want to thin out the deer....[There are] too many [new owners that] don't allow hunting, and I've got irrigated alfalfa, so we'll have fifty, sixty deer out there. And so that is a problem. As people move onto smaller plots, how do you get control of the habitat, [the] deer and game? Some of the people...don't approve of hunting. That's a conflict. Locals, they tend to want to go everywhere and be able to hunt. (*Park County Agriculturalist*)

We're in the process of selling a little chunk of ground in Sweet Grass County....It was a good piece of grass—pasture, and all that....And the fellow that's buying it...all he's interested is how many fish are in the creek on that property. He didn't care how many cattle it would run or anything like that. (*Park County Agriculturalist*)

If you've been in a ranching family, like people who've been here a long time, you've got a different attitude about the land than [incoming people] do. A lot of them have made a lot of money someplace else. They don't want to speculate on stock anymore so they put it in the land. They're not as uptight about what's going to happen as we are....They don't have to pin-point their rights to make a living. (*Park County Agriculturalist*)

Development brings a lot of people in. [We get] more taxes, and more people on the roads, versus you used to be able to drive the roads and there was no one. (*Park County Agriculturalist*)

Agriculture is getting wiped out with more people. More people that probably like the land, but they want the city. They want everything they had in the city. (*Park County Agriculturalist*)

It's changing....even in these environments. Park High [school] and the smaller towns...[have problems with] drugs, and there's all kinds of opportunities for a kid to get lost or pulled astray. So it's changing. It's common everywhere. It's no longer sort of a small, isolated, little community. That's for sure. (*Park County Agriculturalist*)

D. Ideas About Managing Development

That's like the population growth that's going on all over the world, there's just no way to stop it. I mean we can try to slow it down, maybe control it to a certain extent. Sure it would be great if there was no more houses ever allowed, here...draw the line. But we can't do that. There's too many individual rights that you're violating when you try and do something like that. (*Park County Agriculturalist*)

Take [the] new gallery up the valley—what a beautiful addition to the valley. It's gorgeous. It's another commercial place where people can stop and bring money into the valley, but how beautifully well done. That, most certainly, is not a strip-mall. It's gorgeous. Then there's another place they just built that says commercial spaces will be for lease. It's intrusive, it looks like a big shop. It just looks like a metal building right on the highway. It doesn't blend in real well. Most places will build log home or a log cabin so it really blends in well. (*Park County Agriculturalist*)

Part of our stewardship is to make sure....I mean, let them come, let them see, but [don't ruin the valley].....There's a rancher-gentleman in the valley...that made the statement, 'In twenty years, US Highway 89 [will] be solid strip malls.'....That's his fear. He's lived here [and] he's managed the same ranch for twenty-some years. His father managed it for thirty years prior to that. They have been in this valley for a long, long time, and that's their fear. That is their tremendous fear. (*Park County Agriculturalist*)

Stop developing the valley. You're not going to keep people out because there's plenty of homes and plenty of places here already. I'm sorry, yes, the rich are going to get it over the poor, but your poor can stay in the RV parks. Stop developing it. Leave it for everybody. (*Park County Agriculturalist*)

I think Paradise Valley, in general, is going to continue to develop. It seems to be pulling people from all over that want to own a home in a rural setting. There are a lot of subdivisions that...[are] starting to fill up. I hope that this place stays the same. In ten years [I hope] it's still growing hay and grain and cattle. I like the wide open spaces here. I'd like to see some planning done, and some thought put into the development of the area. (*Park County Agriculturalist*)

You know, that's progress, and I can understand that, [but] I don't like that. I would prefer that people held onto it and kept it in a big block of land, and used it for agriculture. But I can understand why that doesn't happen. I mean money seems to be what drives everything. (*Park County Agriculturalist*)

I think you're always going to have your contrast between people whose interest is progress, and those that want to save [the valley as it is]. It's an on-going thing. (*Park County Agriculturalist*)

Some [locals] bought [a large ranch] and do not want to develop it. They don't want to sell it. It is a group of wealthy locals, [from] within a 150-mile radius....[They] don't

want to see it developed, no matter what. They came together in a conglomerate and bought it for \$4.2 million just to make sure it wasn't developed. I know of two other very wealthy people in the area that were approached and [who] said, 'If you guys can't get it together and buy it, then, yes, we'll go in with you. We have to stop this development.' (*Park County Agriculturalist*)

My preference would be that there was a campground somewhere....Down there at the river bend, they can really crowd a lot of people in there...[but they keep it] so neat and clean—and when the season's over, they're gone. (*Park County Agriculturalist*)

Say someone is 18 [years-old], when they turn 30 they would love to have a summer place in Montana. Fine. They have to wait until one comes up for sale. It [should be] like wanting a real Class-A apartment in New York City. Nobody is going to build you one, you have to wait until the next one comes available, [and] there might be a two-year waiting list....Let's take the 100 homes that are [within] a ten or twenty mile distance along the river and make them really prime property because nobody else is going to build right next door....You're going to have to wait until one comes up for sale. (*Park County Agriculturalist*)

I think [we should be] educating these new people....They should do all they can to support Ag. (*Park County Agriculturalist*)

I think the Yellowstone has been improved because of the awareness of the flood plain. (*Park County Agriculturalist*)

E. Setbacks

About four or five years ago [some people] wanted to have a 500-foot setback. That got everybody's attention in a hurry. So we soon shot that one down. [With that setback] you couldn't have done any rip-rap, and you couldn't have done any stream stabilization, and you couldn't do any capital improvements unless you [had] the approval of the group. (*Park County Agriculturalist*)

People have wanted to put setbacks in place on the Yellowstone to keep development away from the Yellowstone River. I think they talked [about setback of] up to 300 feet, maybe, from the Yellowstone River. I think the setback now might be 100 feet. But that's one issue that has come up that people bristled-up a little bit over. I think the landowners themselves would probably be most content with no regulations, but people who float the river, maybe they want some regulation. (*Park County Agriculturalist*)

I feel strongly, if I'm in harm's way, it's my fault and I'll have to deal with it. If they want to pull my insurance that's fine. I have the means to survive somehow. But I think if you do live in harm's way, regardless of wherever you are, you have to be smart. (*Park County Agriculturalist*)

F. Water Rights

Your water right isn't as secure as you think it is. They're saying now a water right isn't a water right, it's a privilege. (*Park County Agriculturalist*)

We are getting a lot of new people moving in from California and New York, and they want water in the creek and don't understand at all...when you explain the water rights. (*Park County Agriculturalist*)

Down the road a ways, I think our water rights are going to be jeopardized. (*Park County Agriculturalist*)

Now they're trying to pass this bill [concerning] the government...and the 'takings.'What do you have if they take your water away from you? (*Park County Agriculturalist*)

G. Tourism and Its Effects

Yes, of course the summer traffic is annoying. But those people are getting to see something that they'll take back to their other world, and it will make them stronger and richer—not monetarily but in more important ways. (*Park County Agriculturalist*)

I think we should shoot our buffalo coming out of the Park with licensed hunters. People say that we [would] lose our tourism because of that. I think, 'Yeah, cool. It will make it easier to for me to haul my equipment back and forth on the highway.' (*Park County Agriculturalist*)

This is still a rural, Ag, community. But there is a group of people that think that tourism and development would be a better use for this area than agriculture. (*Park County Agriculturalist*)

H. Increased Recreation Pressures the River and Agriculturalists

I don't object to [recreation]. People enjoy the river, and I think they should. It's just [that] we love things to death....There are a lot of guides, a lot of people that want to float the river. *A River Runs Through It* made it very, very popular. It's a beautiful book, and he's a nice guy that wrote it—great guy. But I think we've seen a growth in that industry. (*Park County Agriculturalist*)

We are almost a bedroom community to Bozeman. And as fishing becomes more popular, we'll see twenty, thirty boats go past here in a day, at least. That's a lot. And fishing is [meant to help people] get away from crowds....[They] don't want to play bumper boats. (*Park County Agriculturalist*)

There are some conflicts....If [the recreationalists] respect the people who live along the river, and they don't sneak in with a rifle and shoot deer when they're not invited, we allow hunting, but we want to know who's in here. (*Park County Agriculturalist*)

III. Living with the Yellowstone River

A. The Famous Yellowstone River—A Feather in our Cap

Whenever you mention the Yellowstone River to anybody, anywhere in the country, their eyes kind of light up and they kind of perk up. Because anybody who's an outdoorsman knows about the Yellowstone River. This is one of the wildest rivers in the world, and the fishing is unbelievable. It came from the Park and it kind of reminds you of the Park, and to say that we're along the Yellowstone River that's kind of a feather in our cap. (*Park County Agriculturalist*)

It's the heart, it's the heart of the valley. To me, it's the heart of Yellowstone National Park. (*Park County Agriculturalist*)

The river is a fishermen's paradise. A lot of people fish the river. That is the main reason why it is a tourist country. (*Park County Agriculturalist*)

B. Yellowstone River is Big, Powerful, and Abundant

That river can do hell. The culvert there could blow tomorrow, and then we'd really be in trouble. (*Park County Agriculturalist*)

Well, it's what creates all life. (*Park County Agriculturalist*)

I don't encourage a good description. We don't want people to be on the Yellowstone. I don't understand why people want to own property on the banks of the Yellowstone because it is not the best place to live. It is nice to access it, but not to live on it...I went through the floods as part of the Conservation District. (*Park County Agriculturalist*)

We had a fairly decent run-off this spring, and it did eat the bank away, and it actually washed out one of our fences. We had to move our fence and put a new fence in there. It happens. (*Park County Agriculturalist*)

I'd say we've lost...about a half a section....I'll bet we've lost seven acres, at least, from that little pretty bottom area down there....probably six acres. It was only aesthetically valuable, agriculturally it didn't cost anything. (*Park County Agriculturalist*)

If it does come out of the banks, it goes onto us. It floods some of our hay meadows. So be it. We can clean up after the water goes back down. It's just...basically nature taking its course. (*Park County Agriculturalist*)

We've had what you call sheet flooding, but we were never in any trouble. That's where it comes—it doesn't cut, and it's not fast—but it spreads out. Once it gets to a certain height in the flood plain it just flows through the flood plain. And actually it gave us about two inches of new sediment, [which] cut the grass for two years from production, and then after that we really benefited from that amount of sediment. So, in a way, that's the way the system works. (*Park County Agriculturalist*)

IV. *Life-forms of the River*

A. *Wildlife*

It's a great wildlife habitat. We have a lot of fox, and just a real diverse wildlife population. There has been elk in there, [but] that's kind of rare. We'll see a moose every once in a while. There's rock-chucks, lots of birds, owls, we have a few ospreys, it's a place where bald eagles winter. They come in from the high lands, and winter along the Yellowstone. They have a nest down in there. I guess it's our little piece of paradise here. (*Park County Agriculturalist*)

Last night was hard to sleep because the elk were so vocal. We had the wolf people out the other day because we had a wolf that was down in the pastures....[The wolf] kept trying to get to road-kill...a beautiful, big, grey wolf. I mean, you can't ask for anything more. I mean, you really can't. (*Park County Agriculturalist*)

We had a gentleman drive up here one day [and it] turns out he was from Calgary, Canada. He and his partner were fishing down on the Yellowstone. They were here on vacation—he did not have his cell phone with him. They walked out to one of the islands on the river and they were fishing on that, and they happened to see an eagle on the side in the water, very distressed. Long story short, he came over here to ask us to help. We called the game warden, the game warden came down, and we finally caught the eagle. The eagle went to the Montana Raptors Center...they think [it was suffering from] lead poisoning. [The eagle] has completely recovered, and out of the kindness of their hearts they called us when they were ready to release it so we were able to be there and they released it at the same spot. That is the heart of the Yellowstone—it is. That is what it brings out in people. For that gentleman to quit his holiday enjoyment and just care....He didn't even know [what type of eagle it was]. (*Park County Agriculturalist*)

We have [about] 250 mama-cows. They spend their summers elsewhere so that we can [put up] hay. We do not run them on the mountain. There's 7,000 acres up there we could run them on, but [the ranch owner] likes to save that for the wildlife. (*Park County Agriculturalist*)

We do have wolves on this quite a bit. That's fine until they go from their wild state and get into the cattle. We've, so far, not had any problems. (*Park County Agriculturalist*)

One guy saw a couple of wolves....They didn't cause any problems. We haven't had any losses. (*Park County Agriculturalist*)

We work with a neighbor who is a hay producer and two years ago he had to fence off his haystacks....In the last four or five years we have had elk problems. Last year, over here, we had 300 head of elk in there. Once they learn where the alfalfa fields are, they come back every year. (*Park County Agriculturalist*)

B. Fishery Conservation: Mill Creek and the Cutthroat Trout

Mill Creek...has a significant drainage area. Through the Conservation District, they've developed a lot of pivots and irrigation systems...[and the farmers] have taken quite a bit of water. The fisherman and the recreationalists are upset because generally that creek will run dry in the lower end, below where the big head gate is, [in] mid-summer....Fish and Game want to restore the cutthroat fishery, and they don't know quite how to do it. They can buy the water, [but] at what cost? I don't know what they arrive at, but there's a conflict [between] recreationalists—the new second-home people that moved up there—and some of the older, traditional agricultural water users—primarily ranchers, and alfalfa [growers who]...use the water for their livelihood. I understand the need for maintaining some water flow...[and] there is another approach....That lower section is just going to run dry at certain times of the year....When...the small fish get to a certain size [upstream], they'll flush [the creek] for three or four days....Open that up and blow all those little fish into the river. But that's expensive, they have to pay for that water, and there's some concern about fire [in late summer]....Having that water is pretty nice...when you're worried about fires. (*Park County Agriculturalist*)

C. Cottonwoods

You could see all this downed cottonwood as you drove in here. Cottonwood is a sloppy tree, and we're always chopping it, and cleaning it out, and using it for firewood. Its marginal firewood, but this generation of cottonwood is starting to die and they are always self-pruning. They blow down, they snap off, they're sort of a weedy, big old tree. I love them, but they make a mess and so we have undergrowth building up right here, near us, that concerns me. Fire is always a concern in certain areas where you've got an accumulation. (*Park County Agriculturalist*)

D. Noxious Weed Management

Weed control becomes an issue...because when the floods come, we get the weed seeds [coming from the National Park]. Even fishermen who use the river on a regular basis are bringing weeds along with them from wherever they have been. I would like to see the fishermen that park on the islands for lunch go pull weeds and share in the responsibility. (*Park County Agriculturalist*)

The task force didn't want to use chemicals along the river so we end up with a weed patch. Big time. They have come out with a new chemical called Milestone, and you are supposed to be able to use it around...waterways, and it is not supposed to be harmful. It is quite expensive but it does show some promise. (*Park County Agriculturalist*)

V. *Controlling the River with Rip-rap*

A. *Rip-rap Seems to Work in Some Places*

You need to use big rocks. You don't want to put in small stuff or it will wash away. It has to be done according to soil conservation specifications and all that. Big rocks on a bank are the best way. (*Park County Agriculturalist*)

Something that will work is hard rip-rap and barbs...None of that [soft rip-rap] has ever worked on the Yellowstone. I can see where it might work on a river or stream that is not as violent. (*Park County Agriculturalist*)

I think every time man decides he's going to manage nature, he normally screws it up royally. (*Park County Agriculturalist*)

B. *Rip-rap and the Potential for Shifting the Problem Elsewhere*

Erosion [happens] on the banks...which is too bad....You hate to lose areas of the ranch, but [if you] put structures in the river, and try to push the river over, you effect somebody else. So it's a no-win deal, really. (*Park County Agriculturalist*)

I just think that there needs to be some careful planning....when stream bank stabilization is done to make sure that you are protecting your property but not jeopardizing someone else's. (*Park County Agriculturalist*)

Some of it was rip-rapped before we came. I know it is a controversial thing. You rip-rap here, and the water hits it and sends it across the river, and it does more damage to the guy that lives next door. You are sending the problem further down the river. I am slowly learning that...[but when] you see your own land disappearing, it is hard. (*Park County Agriculturalist*)

C. *Rip-rap and Difficulties Getting Permits*

They have almost shut down any bank stabilization....I should do some bank stabilization but I don't know if I have it in me to take the guff that it is going to take to get it done. It is tough to have to do battle....I just dread it. (*Park County Agriculturalist*)

All my father-in-law used to do is talk to the [Conservation District] and the Army Corps. They used to design the project for you, but they don't anymore. (*Park County Agriculturalist*)

Well, it's going to take some time and you have to kind of get ahead of the curve. If you've got a certain time schedule....you have to get started, [but] like I said, we found them very reasonable. (*Park County Agriculturalist*)

The banks have to be stabilized, and we have had to do quite a little of that since we've been here—thirty-seven years. But we've always had good cooperation from the Bureau of Army Engineers and the...Fish and Game and those [in the] conservation services. I think they've treated us fairly....We've always left some riparian area there along the river. We never graze that real hard. There's always a lot of grass and brush and things like that, and I think that's probably one reason we've always been able to get along with the Fish and Game and the Bureau of the Army of Engineers because we've always tried to leave the riparian area there next to the river. (*Park County Agriculturalist*)

We had to haul rock in, probably 85 percent [of what we used]....Maybe even more than that, maybe 90 percent. (*Park County Agriculturalist*)

We counted them. There were thirty-one different representatives from different agencies [involved in our project]....We had an engineer that should have known we had to re-apply, and he didn't even know. (*Park County Agriculturalist*)

D. Natural Techniques of Bank Stabilization

I think good riparian management is probably the major way that we keep erosion down. There is a lot of shrubs and grass. (*Park County Agriculturalist*)

They have some new things they are trying. It's a blanket thing, and they plant willow trees in it. [It is] working on small streams, but it won't work on the Yellowstone. The beavers come along and eat the willows off that. (*Park County Agriculturalist*)

People would say that in order to be environmentally sound I need to let that river come rip-roaring through my property and it will be fine in 500 years. I don't have 500 years. There is benefit to man being here. We do good things here. Man does need to manage, but he needs to manage softly. (*Park County Agriculturalist*)

Our attitude is that we'd be more than willing to move the fence ten feet than screw with the river. (*Park County Agriculturalist*)

When I was in grade school they talked about you shouldn't do things that cause erosion. Yet, here is the river running rampant and many are opposed to trying to prevent it. And for the life of me, I can't understand how allowing the banks to erode and cut away adds anything valuable to the river. All it does is add sediment. I am a little confused about that direction. (*Park County Agriculturalist*)

If there are some artificial ways that we can replicate the positive impacts of flooding, but still be able to mitigate the damage, then I'll try to implement them. (*Park County Agriculturalist*)

VI. *Visions of the Future and Collective Management*

A. *Visions of Change*

There will be more development in rural sites, homes....We're becoming a bedroom community for Bozeman almost. (*Park County Agriculturalist*)

I don't think this valley will be near as attractive if it's completely full of houses as it is now. (*Park County Agriculturalist*)

I don't think my sons will go into agriculture. This place wouldn't support them anyway. Potentially they'll sell it. I'd like to see it stay as it is, but realistically, being near the interstate...[they may sell]. The flood plain probably won't be developed because of regulations, but the upper bench land will probably have a bunch of homes sitting up there. (*Park County Agriculturalist*)

One of the reasons tourism is good here is because of the way the land is. People want to see the wild, wide open spaces. I don't know that they'll want to come here to see the river flowing through a big development. (*Park County Agriculturalist*)

I think there's a movement toward eliminating any kind of activity on those flood plain areas. (*Park County Agriculturalist*)

It probably never will get balanced. It will be majority rules. The property along the river is eventually going to lose. (*Park County Agriculturalist*)

B. *Management Priorities*

There needs to be a way to keep agriculture viable and keep the ranchers paying fair taxes. You can't pay taxes based on subdivision values on farmland for very long – you'll go broke. (*Park County Agriculturalist*)

There's a subdivision right next to us, and I guess if the money is important to you, then you know [what] to do....But there's wide open space, which is kind of what makes Montana as far as I'm concerned. I think that has some value to it, too. There's a lot of this open space, that's still open, that ought to be kept open. (*Park County Agriculturalist*)

The watershed group has a purpose....As we try to encompass the entire valley maybe some of this can be controlled...You have to look at the whole. When you start breaking it into pieces, you are like these tunnel-vision groups that don't want to look at the big picture and how an area can survive. (*Park County Agriculturalist*)

I think the most important thing to me is to protect the river from pollutants, from fouling it in any way. I think a magnificent job has been done about the fishing [with the] catch

and release [rules]....The only problem that I'm aware of is the lead with the eagles. (*Park County Agriculturalist*)

Somebody has to come to the forefront and...we have to start providing ourselves with some water....Climatic changes, population growth, and industry are coming, and we will need more water. (*Park County Agriculturalist*)

So there's a lot of concern about fires. I worry about it. (*Park County Agriculturalist*)

We actually have a water right to 750 inches off the Yellowstone, [but] rather than withdraw the water directly from the Yellowstone, we actually take it out of the sumps [that draw] from the groundwater. Hopefully, [by not taking water from the river directly,] it sustains the fish in the Yellowstone. I would like to see other ranchers do that, especially during spawning seasons. It would save a lot of work of having to maintain that ditch every year. (*Park County Agriculturalist*)

In the cattle business today, a good year is a break-even year. With those narrow margins, you are probably going to be buying food and clothes for the family rather than putting money into environmental projects. There is not a rancher I know that wouldn't do it if he had the money to do it. If environmental sensitivity is important to the public, then maybe the public needs to help to support those programs financially....I don't know how you show people that the margins aren't there. (*Park County Agriculturalist*)

We [were recognized because] we preserve [acreage in the mountains] for cattle, [and] also it's preserved for wildlife. The award system is called Undaunted Stewardship. It is an exciting program that began in 2002. There have been over eighty ranchers that have been awarded for environmentally sensitive practices. (*Park County Agriculturalist*)

C. Government and their Management Techniques are Questioned

I don't like legislation because it seems to be arbitrary. I don't see any flexibility, either you do or you don't. It's like this house. We were grandfathered in, and we're living where they lived for almost a hundred years, and yet there are a lot of people who object to our living over here. (*Park County Agriculturalist*)

Everybody's a little leery about some [governmental] program that's going to leave an agency being married to them. So that's one fear that certainly a lot of us have. (*Park County Agriculturalist*)

When [my project was] washed [away], I was pretty upset because I put in a lot of work and it cost a terrible amount of money. Along in June one of the agency personnel showed up and said, 'How did that project work out?' I came apart. He said, 'I could have told you that wouldn't work.' I said, 'Why didn't you?' He said [the Army Corps of Engineers] wouldn't let him talk. There was an, 'agency difference of opinion.' (*Park County Agriculturalist*)

[During] the last bank stabilization project...it got kind of tough, and [there were] a lot of inspections, and it raises the expense, and you have to go for public review. I don't want to be a public person. All I wanted to do is ranch and do my thing. I had no idea I would become a public figure and be in the New York Times. (*Park County Agriculturalist*)

It's the people's river. So, that is what got me on the Task Force in the first place....If my dog goes over on the neighbor's, and causes difficulty, it is my responsibility. If that is the people's river, it is their responsibility to keep it within the bounds. (*Park County Agriculturalist*)

D. The Governor's Upper Yellowstone River Task Force

The Yellowstone River Task Force was formed because the local people here...are pretty recreational-minded. Fishing's a pretty big deal here in Livingston. They were trying to figure out, after the flood, what was the cause of the loss of the fish... That's how it all started, and then of course there was a lot of sentiment about building next to the bank, and there was a house that was too tall here, and they wanted to change the channels and stuff like that. And they were just trying to get a hold on the thing. They were just trying to prevent some of the things that have happened, which is not all bad. (*Park County Agriculturalist*)

I abandoned it when...they started talking about the morphology of the cottonwood trees and all that baloney, which I consider baloney, and maybe it isn't, but anyway. Then when the fish numbers came back, and it had nothing to do with the stream bank stabilization project? Hell....There was an agenda for a while that was going to blame the ranch for about everything. (*Park County Agriculturalist*)

A lot of the older, rural ranchers thought the make up of that Task Force was a stacked deck. There was a feeling that those with agricultural interests were not as well represented as they could be. I sat in on a few meetings. I wasn't totally comfortable with the make up of it. (*Park County Agriculturalist*)

A lot of the very active people on the Task Force probably have a different view of private property and things than I do. Though it wasn't expressed, I felt that a lot of the people would like to see tighter regulations....[I have a] more lassie-faire view. I understand the need for intelligent regulation, but I don't want to see government grow to the extent that we probably couldn't build here [on our property] if we tore down the old house. (*Park County Agriculturalist*)

I think the majority of the people would like to see more legislation or regulation along the river flood plain area. And I think that in this study the state conducted...they put a hell of a lot of land in the floodway and the flood plain. It encompassed a huge area, and I think that their numbers were jaded. They used a method of finding elevations which I think was sort of arbitrary. I don't think it was scientific and accurate. I mean, we should be underneath the Yellowstone according to their maps, [but] we've never had water flowing through here. (*Park County Agriculturalist*)

I know they did a lot of surveying, and they tried to maybe understand how this river flows, and what happens when the water gets high. I don't really know what its goal was, or what it accomplished, if anything. (*Park County Agriculturalist*)

I wouldn't have found out [about the new flood plain maps] if a landowner hadn't contacted me about what they had come up with. You know they didn't send those flood plain revision maps out to us. (*Park County Agriculturalist*)

The time I spent on the Task Force, I enjoyed. Some [of the information] was way over my head and my education level. I have a whole stack of material, and I don't think there is a human being alive that could take that stack and make sense of it....They were all experts in their field, but we didn't have a person that took that information and put it into any kind of program.... It just wasn't gathered up...I don't know if there was anybody that could do it... When I listened to all the experts...nobody put the thing together, and they still haven't. (*Park County Agriculturalist*)

E. A Promising Gathering in The Upper Yellowstone Valley Watershed

The Upper Yellowstone Watershed Basin group, they're amazing really. Because they handle all issues. (*Park County Agriculturalist*)

I'm involved in the Upper Valley Watershed, and they're trying to do some stuff with ranchers. They have education for the people that are involved in it, and yet everybody that's in that watershed are all in the same group. So everybody is welcome to come to those. They get to hear from both sides a lot of times. I think there has been a lot of good that comes out of those watershed groups. (*Park County Agriculturalist*)

They get together, brainstorm, and come up with ideas for fighting weeds, and conserving water, and helping the fish in the streams. They get together, and they try to bring down grant money from the government and stuff like that. And they're effective. (*Park County Agriculturalist*)

We were involved in a pretty good-sized range fire and the watershed group worked to get some funds for fencing and range rehabilitation. [The group] has been pretty active....[and it includes] twenty-acre and ten-acre people. We have a weed fair, and they get educated on what weeds are bad, and what works, and what doesn't work. (*Park County Agriculturalist*)

F. Other Local Non-Profit Organizations

The Greater Yellowstone Coalition, they're looking over your shoulder all the time trying to find something the matter with the rancher or the farmer. That's my sentiment, exactly. (*Park County Agriculturalist*)

Trout Unlimited...all these green organizations, you know they're all looking down your shoulder. You know that. (*Park County Agriculturalist*)

I was surprised that there wasn't ranchers [at the water symposium], because it's a ranching community. The sub-dividers were there, and the planner that was having all those problems was there. (*Park County Agriculturalist*)

We have numerous environmental organizations in the county that are very active. I don't think they have a total grasp on what they are trying to do....DNRC came in with a conservation program that was totally unrealistic and so it failed. It might have worked down around Eastern Montana, but it was so far out of kilter here. They didn't believe what the value of the land was here....I think they had a valuation of \$700 or \$800 an acre. I knew of some property that sold at...\$10,000 per acre....From here to Sweet Grass County and [their program] just wasn't realistic....It was just too confining. (*Park County Agriculturalist*)

G. Possible Partnerships

What is encouraging to me is that a lot of environmental groups also recognize the value of having ranches and farms because they guarantee open space. I think they are more willing to listen to us, [but] they still have more power, more influence, and more dollars. (*Park County Agriculturalist*)

It's just part of life around here....There's so much wildlife....You have to be not-too involved, but you have to be in communication with [wildlife organizations and authorities]. You have to be available to them so that they are available to you when you need it. (*Park County Agriculturalist*)

It looks to me like the agricultural lifestyle is going by the wayside. This community was an agricultural community at one time, and I think it's migrating the river, to a more recreational community. I think and feel there is some miscommunication between what the ranchers have to offer in this field of recreation. There are a lot of ranchers involved in recreation as well, and it just seems to me like there needs to be some education as to what everyone can offer. So it can work for everyone. (*Park County Agriculturalist*)

There's also a pretty big sentiment [among the newcomers] to keep the ranchers...to keep it open....Some of these people...buy a big ranch, and they don't want a big subdivision next to them. Some of them are [saying], 'Well, let's protect this guy because we want to protect our view of the scenery.'...So, we've got to the point now where a lot of them will help us, especially up in the Shields Valley. (*Park County Agriculturalist*)

I think that we need to have a voice so that people understand why we're doing what we're doing. (*Park County Agriculturalist*)

I think there are some people that want to see the agriculture survive just for the benefits for wildlife. They could see the handwriting on the wall, that there are going to be more and more homes built, and habitat for wildlife would become a premium. (*Park County Agriculturalist*)

I think in the long run it would be better to support Ag, even from [the newcomer's] standpoint. Ag is what the people like about the valley now. (*Park County Agriculturalist*)

Springdale to Gardiner: Local Civic Leaders Overview

Interviews were conducted with eight individuals holding civic leadership positions, including city commission members, county commissioners, flood plain managers, and city/county planners. Participants were identified through public records.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|---|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Springdale to Gardiner: Local Civic Leaders Analysis

I. Park County is Growing and Changing

A. The Allure of Paradise Valley

It is the last undammed river in the U.S. and that has a certain allure. (*Park County Local Civic Leader*)

It is easy to describe because people have a picture of what Yellowstone Park is even if they have never been there. I describe it as an extension of Yellowstone [Park]. You attach things like the fishing culture, the hiking, the outdoor mountain recreation. I don't think anyone gets a sense until they have been there. (*Park County Local Civic Leader*)

It is a place of unbelievable beauty....Tremendous beauty....[This area] is very pristine and clean, and wonderful air and light, and very clean compared to other parts of the country. Fantastic wildlife. The weather changes all the time. It is entertaining just to watch the weather. It is really beautiful. I don't tell other people that. I just tell them I enjoy it and leave it at that. No sense advertising too much. (*Park County Local Civic Leader*)

[People are drawn to the river for]...the surrounding beauty and the river itself. People like to be on it and look at it. They like to fish it. They like to sit and contemplate life. (*Park County Local Civic Leader*)

[The Yellowstone River] is the lifeblood as far as Ag and recreation goes. It is what draws people here....It is the main artery through Paradise Valley for sure. (*Park County Local Civic Leader*)

[The Yellowstone River] is an integral part of a greater thing...the Absaroka Mountain Range...Yellowstone Park itself and the massive volcano that Yellowstone Park is. All of that taken together is what makes this area what it is. (*Park County Local Civic Leader*)

I don't think there is a whole lot you can do [about population growth]. Unless you can build a wall around western Montana....[Or maybe] if they would just stop them at Billings and not let them come this way. I would sacrifice Billings....[Or] if they would just ban all movies like *A River Runs Through It*. We had more damn fly fishermen show up after that movie came out. (*Park County Local Civic Leader*)

It is also one of the few western rivers, or eastern rivers either for that matter, that has spring water year round coming from those huge underground springs under Yellowstone

Lake....[And] there are spring creeks that run into it, too. (*Park County Local Civic Leader*)

I have floated all the way down the river. It is amazing the diversity. The birds are incredible. You see warm water and cold water fish. I went clear to North Dakota. I went around the diversion dams. I watched them catch the paddlefish. The people that are into it, are into it....I love that country down there. I could move down there. East of Billings down is fabulous country. It is a neat float. You have these stretches that are like floating on a lake. There are not very many runs [with rapids]. Here you have one every quarter mile or so. There you have stretches that go for a mile. It is the only way to see the river. (*Park County Local Civic Leader*)

It's a picturesque valley....It's obviously...a great place to fish and a great place to just view...This fall is especially colorful. It doesn't always happen this way, sometimes it freezes and the leaves just fall off....I'm not a big fisherman, but it is kind of nice to be within three or four miles of a blue ribbon trout stream. (*Park County Local Civic Leader*)

B. The Transition from Agriculture to Recreation—A Rich Man's Disneyland

It's changing....There is a lot more houses than there used to be....It is just a reflection of the whole transition from an agricultural based economy...to a tourist and recreation area. (*Park County Local Civic Leader*)

We have CEO's from big companies...that fly in with their jets and helicopters. They will spend a day, or a few days, and then they are out of here. The rest of the year we are taking care of it. We worry about weeds and roads...[while] they have one little ranch manager whose authority is limited to keeping people out....We don't want to be a rich man's Disneyland. They come, they go....We are trying to maintain something and still be progressive. (*Park County Local Civic Leader*)

The land prices are high, at least agricultural lands. It's being influenced by recreational ranch buyers. (*Park County Local Civic Leader*)

We have seen such a change as far as industry and development. We used to be a logging [community]. We used to have a railroad going through here. Those are just about defunct in this area. We have a lot of people that have moved here recently and a lot of natives had to move out although the numbers may not show that in population. We do have a lot of new people with new ideas. (*Park County Local Civic Leader*)

When I was a kid, agriculture, and particularly livestock, was far and away what everybody was engaged in. They were all working farms and ranches. Recreation was interesting, but it was way down there [in terms of economic importance]. Now everybody that has any land out there has either sold it or is waiting to sell it. [There is] hardly any livestock....A lot of ranches exist in name, and maybe in area, but they are purchased by absentee owners or part-timers, and they don't have any interest in

livestock. It has been a whole different slant on the vegetative and ecological part....The farm ground is worth so much...they can't afford to not sell. (*Park County Local Civic Leader*)

I think it's a more diverse economy than people realize. I think there's the perception that we're a tourism based economy, and we are to a point and in a sense, but it's not the typical t-shirt and motel curve. A lot of it's based on...guided fly fishing and a lot of outfitting....It's a fairly diversified economy based on manufacturing, commercial, motel, certain products...and agriculture, although it's a very, very small part....It's very eclectic. We have a lot of artists, writers, musicians, and a lot of creative folks. And we have a fairly high seasonal element of residences, although...we're starting to see more people that are living here full-time. That's more true of the town than it is of the valley. The valley still has a very large seasonal component to residents. (*Park County Local Civic Leader*)

Livingston is going to be more economically diverse ten years from now. Not quite so heavily dependent on tourism for economic livelihood....[I also] I think Livingston will be someplace that continues to place a high emphasis on quality of life. By that I mean recreational programs, homegrown restaurants, a strong downtown, and all those types of things. We don't have a diverse economy right now. We are developing quality of life issues. (*Park County Local Civic Leader*)

When I was growing up, that whole valley was agriculture. You had people raising cattle, raising pigs and sheep. They brought all that to town and sold it in town. They brought their crops in. They supported the local businesses in town. We had clothing stores. We had grocery stores on about every block. The people were in here buying machinery. Everything is changed. Now we have 22 art galleries. You can't buy a pair of shoes or a white shirt in this town....All of that money is going out of town. We had a Penney's and a Montgomery Wards, we had two men's stores and two or three ladies stores...above and beyond Penney's and Hennessey's and The Bon. (*Park County Local Civic Leader*)

[In the past] everybody knew everybody. Now you are lucky if you go downtown and know anybody. We used to have cohesiveness and support for sports and things like the county fair. Now, with this new breed of people, they want galleries. They want lounges, not little hometown bars. They want classy eating establishments, not hometown cafes. They expect services like where they came from and we are not equipped to handle it. There is a lot of misinterpretation of expectations. This used to be an eight-to-five community. There were ten or fifteen bars. People went downtown all nights of the week. Now you go downtown at 10:30 and it is all rolled up. The events that you used to look forward to, like the rodeo and the fair...have all been diluted and changed. The fair is barely hanging on. The new rancher doesn't have four or five kids in 4-H. They are flying in and out, and their kids are going to private schools....The base of the community has changed. You don't have third and fourth generation families. (*Park County Local Civic Leader*)

There is a certain attachment to this land...The other thing is the feeling of community...although that is waning. I don't know many of my neighbors anymore. (*Park County Local Civic Leader*)

No one knows their neighbor is anymore. It has lost the cohesiveness. (*Park County Local Civic Leader*)

When I first moved here I enjoyed the culture. It was very unique to this part of the world. It was a working-person's town, the blue-collar worker. It was a tightly knit community. It had its definite own culture....That is going away rapidly right now. (*Park County Local Civic Leader*)

It's a conservation-oriented Commission who is faced with some very big decisions. We just looked at another potential development east of the river....Between that and another development across the highway, those two developments will double the footprint of Livingston, not necessarily in terms of population—it would add another about 2000 people—[but] the spatial foot print would double. (*Park County Local Civic Leader*)

C. Wide Open Spaces Aren't Wide Open Anymore

People come out to Montana and they are enthralled by the views and the attitudes of the people and....They settle in here and they want to have it all, but by some of their actions they are responsible for destroying the things that they admire....They want their big castle back in the trees, or up on a ridge, or right next to the river. They have destroyed what made it beautiful....The wide open spaces aren't wide open anymore. (*Park County Local Civic Leader*)

You see the new people that are decked out in waders and a \$700 fly rod and their \$5000 boat....The locals go out with their old bamboo rod in their tennis shoes....The local guy gets upset when [the new guys] pull in...to [the local guy's] fishing hole. And the [new] guy gets upset when [the local guy] throws rocks....These things go on every day. (*Park County Local Civic Leader*)

In the last 20 years it has changed so much....I live on the west side of the valley and...when I was a kid, growing up, if you had a yard light you were lucky. You would look across the valley and it was black. If you go in that valley now it looks like suburbia—it is just incredible the number of lights. For the most part it is concentrated very near the river which puts more pressure on the river. (*Park County Local Civic Leader*)

When I first was growing up here, you could drive to a high point in the valley at night and you could look down and say there is Feldman's ranch over there, there is this ranch and that ranch. Now it is awash with lights. (*Park County Local Civic Leader*)

I look for more people. We have a beautiful way of life here, and we have everything...and we aren't hidden or obscure anymore. They came to Aspen and Jackson

Hole. They came to Whitefish, Big Sky, and they will be here. They will come and develop it. (*Park County Local Civic Leader*)

I don't want any more [people] to come. (*Park County Local Civic Leader*)

We are in kind of a boom and we are becoming a bedroom community for Bozeman. These people are used to driving hours in five lane traffic, with solid traffic. It isn't a big deal for them to drive 20 minutes with beautiful scenery. (*Park County Local Civic Leader*)

Twenty years ago, a lot of ranches were saved by the ability to sell ten acres to some guy from Florida....Now the cost of splitting-off ten acres is pretty major so you're going to see developers come in here and buy whole ranches and subdivide them....A developer...has to spend \$200,000 to just get it ready for marketing and the typical rancher [doesn't have the money]....On the other hand, there's the guy that can come in here and buy a ranch and has the money to run the ranch with long term investment in mind. It'll be either one of those because the land values have been [increasing at] 15 to 20 percent in a year, which is way better than the stock market. So it's a good investment. [The new ranches vary in size] from 160 to 10,000 acres....Some new ranches...cluster housing and then [create a] homeowner group....They still call it a ranch, yeah. [They are not the people] with five-million dollars....[who] want to buy an....8,000-acre ranch....Typically [they] want to put a buffer around themselves. (*Park County Local Civic Leader*)

Ag lands contribute to the beauty of the area, the open space of the area....I like the conservation easements....The conservation easements are controversial, but I see them as protecting us from developers. Do we want open space or do we want houses? And the other side of that is, ...if you see the beauty of the Paradise Valley, a lot of the beauty is [in] the open space the ranchers are protecting....Which people don't even see, especially environmental groups, which really aggravate me. That's why you have wildlife on those fields and birds. If you had houses there, you're going to have a groomed lawn and too many horses. (*Park County Local Civic Leader*)

D. A Crowded River, But Let's Not Protect it to Death

I'm expecting to see more recreational ranches more houses on the river, more houses in the mountains....more of the high income, non-resident, second home people that don't rely on this county to provide their income....The people that can afford to have a second home can afford more recreational activities. They tend to use the recreation harder than what was done 20 years ago when the majority of the land was owned by Ag people. (*Park County Local Civic Leader*)

A future issue is how much traffic that river can stand. When I was a kid we never thought much about the river as far as floating it. Nobody even thought about it until the '70's....[Some of us] floated it in inner-tubes. There wasn't any guides, now you have hundreds of them. (*Park County Local Civic Leader*)

It used to be you put your boat in the river, and you would see two or three boats all day. Now it is bumper boats. I used to float it twice a week, at least, and now I do it twice a summer, at most....Now there are fifteen cars at every access and they are all out-of-county plates. They come to take care of the fishing for us. (*Park County Local Civic Leader*)

I won't float [above Livingston]...because the etiquette of a lot of people is not very good. If you are standing there fishing they will run you over with a boat. (*Park County Local Civic Leader*)

[Fish, Wildlife and Parks has] done less than a stellar job of controlling people....Those fishing accesses are typically acquired [where there is] private land on both sides. The fishermen tend to walk up the river, which is their legal right if they stay below the high water mark, but what is the high water mark? Is it the 100-year flood or the 500-year flood, or the typical high water mark in an average year? So you have landowner-fisherman conflicts. (*Park County Local Civic Leader*)

You have a lot of complaints on access sites that aren't well kept....People pull in and have a campfire, or walk their dogs to take care of nature's call....Some have restrooms, some don't. You get a lot of complaints of people going to the bathroom along the side of the river. (*Park County Local Civic Leader*)

It seems to me like Fish and Game could be a little more landowner-friendly by putting up outhouses....You see these guys going in the bushes....And then the dogs, there's a lot of dogs on those boats, and [when they pull off onto the] bank, the dog runs all over. And they wouldn't tolerate that if you stopped on their front lawn and turned your dog loose....They've got to be more cognizant of courtesy, and the guides may be the worst. To me the typical guide doesn't care about the river, he doesn't....We've got islands on the river that are full of knapweed, and some guides will pull some weeds here and there and fiddle around, but the other guys just sit in their boat and wait for their client to get tired of fishing. They're goal is to get their 300 bucks or 400 bucks and go. (*Park County Local Civic Leader*)

You're trying to graze cattle along the river and some fisherman is out there whooping and hollering—the conflicts are there. And then the boaters, you consistently see boaters, floaters. (*Park County Local Civic Leader*)

It isn't that we have to change it or protect it to death. We need to maintain it and respect it. I hate to say it, but the usage is going to have to be limited. You can't just send 200 boats a day down that river. There has to come a point, like with the Smith River, it will have to be limited or on a permit basis....You will have to be a resident, and they will give out so many non-resident permits....I don't know what the answer is, but we have to do something to change or we can forget it. (*Park County Local Civic Leader*)

II. Resource Concerns

A. Fisheries and the Ecosystem

[As fishers] we used to follow the Salmon Fly hatches from...Laurel to here. Now you can't find any [hatches] here....They are real sporadic until Yankee Jim Canyon. I don't know if it is pesticides or traffic or what. You don't have the aquatic insects that you used to. (*Park County Local Civic Leader*)

With regard to pesticides, there is very little agricultural activity up there. There are a few that spray alfalfa, but very few. They spray some for bud worm on the mountains....I always thought the fires in Yellowstone might have had something to do with the insects, too. I don't know. When I was a kid there were billions of them. Now you are lucky to see one. There are still some from Carbella up...once in awhile....You still get the Mayfly and the Cadis Fly. I thought it was the railroad for awhile but I saw them disappear up further. (*Park County Local Civic Leader*)

I worry about is all the catch and release. They say, 'Oh, it doesn't hurt the fish.' I don't believe that for a minute. You don't put a barb through an animal's mouth and...drag it through the water. I don't believe for a minute it doesn't hurt the fish. The fact that they might come in and unload something from their tackle box that comes from a different area that might be a disease that you are entering into the ecosystem. And the weeds. There are invasive species of plants and animals that might get in the water. You worry about the biological stuff that might go on. (*Park County Local Civic Leader*)

From a fishery point of view [we must] maintain the quality and quantity of the water....This section of the river is heavily impacted by the National Park, of which we have no control over. The Park Service continually says, 'We aren't a ranch and we shouldn't manage our wildlife like a rancher manages cows.' However, buffalo and cows eat the same thing. And it concerns me when people get all excited about saving the buffalo when in reality they don't understand the long term impact that the buffalo, or the elk, are having on the range grass ecosystem up there. (*Park County Local Civic Leader*)

My biggest concern is if this drought keeps up....When you don't have a drought, the Yellowstone has tremendous flushing systems. There is a tremendous amount of water every year that we haven't been having lately. (*Park County Local Civic Leader*)

The Governor's Task Force...did focus a lot of attention on the riparian zones...[They brought attention to questions such as]...What are the alternatives of grazing management? And, what are the implications for riparian zones? What are the effects that riparian zones have on avian productivity?...[On] diversity and preservation of fish habitat?....There is more public awareness...than there was say ten years ago. There's an awareness that a lot of what we've done to the river is to diminish the productivity of the riparian zones. (*Park County Local Civic Leader*)

We haven't seen the leafy spurge infestation that some parts of the state to the west have, but we do have it here. (*Park County Local Civic Leader*)

[Set-backs can function as] a public safety component, and there's also a river health component. You don't want to be in situation where you see...concrete sides and sedimentation runoffs in the river? So far, this river system has been fairly resilient....there is a fair amount of seasonal rehabilitation that the river does for itself, but that's limited in terms of capability, and it's hard to know what the limits are without bumping up against them.

The Governor has proposed spending a sack load of money on new public access. What is typically not in those acquisition dollars is maintenance dollars. And Fish, Wildlife and Parks has always been short of maintenance dollars. It's easy for them to get federal money or grant money to buy land, but they don't take care of the weeds, they don't take care of the trees, they don't take care of the whole ecosystem, if you want to talk about that....I continually say that the tree-huggers, or whatever you want to call them, don't give enough credit to private landowners...They'd like to see the whole valley owned by the government, but the government can't take care of what they've got. (*Park County Local Civic Leader*)

B. Agricultural Uses and Practices

We used to drill nitrogen every year [as fertilizer]. I haven't seen anyone doing that....There is some pretty shocking things about nitrogen....If you have a hard rain it goes down and it sits down at four feet. There is an unbelievable amount of nitrogen just sitting there. There are no plants to absorb it [when it is that deep]. (*Park County Local Civic Leader*)

The river is obviously a major source of irrigation water....There's several operations that use the river to supplement their ranching income....Agricultural producers...divert water out of the river at a relatively low cost and use the water to produce crops. (*Park County Local Civic Leader*)

People come in and buy a ranch and they have the choice of...letting the property sit idle, employing the use of a ranch manager, or leasing it out to a neighbor. Typically those [new owners] are...profit motivated so they don't like it to sit idle. They want to generate some income so typically they either employ a ranch manager or lease it out....[Their choice can depend on] who they meet. If their realtor happens to introduce them to a neighbor and they build a trust, then it will be leased. If the realtor happens to suggest a ranch manager then it will be managed. A lot depends on the size [of the ranch], but even [with] the small size [ranch]...a buyer will employ a manager so he can have control....verses [the owner who says] 'I just want to show up and know the place is relatively safe.' (*Park County Local Civic Leader*)

C. Drought—A Semi-Arid Place Pushing Arid

If you go by average annual rainfall in most of Montana, and you compare that to what constitutes the definition of desert, this place should look like the badlands of Nevada. But it doesn't, and the water in that river is why. (*Park County Local Civic Leader*)

We used to be semi-arid and now we are pushing arid. We used to get 17 inches [annually] but our average is way down....We have had eight inches this year so far [October]. (*Park County Local Civic Leader*)

We're going to see more de-watering because of climate change. There's a lot of irrigation in the valley....As agricultural land is being converted to residential subdivision development [it will] probably will create fewer demands on the river itself, [but] probably more demands on groundwater, which will impact the river in a secondary way. (*Park County Local Civic Leader*)

D. Water Rights and Impacts on Neighbors

The more people that you have moving in, the more problems you have with water rights and underground water. There has been a tremendous amount of water identified in parts of the valley. If you put a subdivision, here, you could drain the guys down below you....For the most part, the west side of the valley has a problem with water. On the west side of the river there are definitely places where there are problems finding water. On the east side there is a huge aquifer up against the mountains. They figure there are 800 feet of gravels there that store water. (*Park County Local Civic Leader*)

[We deal with] subdivisions that are on the Yellowstone and water quality issues. The sanitarian [is in charge of] permitting septic systems....[The permits] have to be looked at and signed off by the DEQ and our local sanitarian. (*Park County Local Civic Leader*)

It is amazing [that] only one-half the county is zoned. You might buy a piece of property and create a nice place...but your neighbor could create a gravel pit. You get a lot of conflicting land use because there is no zoning. People fight [zoning] because they want freedom to do what they want with their property. (*Park County Local Civic Leader*)

People complain about their neighbors, and we referee....Sometimes they can get a lawyer and sue. There are not a lot of regulations, and we can't go out and wing it....We refer to the County Attorney to see if it is something we can pursue. We can't make up our own rules. We try and do the best with the rules we have...[We try to] not appear to be heavy handed, but not appear to do nothing. (*Park County Local Civic Leader*)

III. Dealing With A Growing Community

A. Problems with an Undefined Flood Plain

We will listen...and advise....We look at hydrology, [to see] if it is...in a hazard area. We have regulations about altering the flood flow or armoring the banks or putting fill in. We look at all these things. The best thing we can tell them is, 'If you get near the river, you will get your feet wet.' (*Park County Local Civic Leader*)

The floodwall that we have is supposedly at risk because it has trees growing in it. It has all kinds of mitigation problems. At the same time, since it was built...the dike has not given way. [The dike] doesn't [pass inspection] in terms of 100-year flood protection, but it has withstood two 100-year floods in the past decade. So you look at it and say, 'What is up with that?' (*Park County Local Civic Leader*)

We have flood plain issues that are dealt with on a continuing basis....They are actually completing a study in the valley trying to re-establish the actual flood plain. It has been fairly controversial....[One set of designations affected] a lot more land area than what they had anticipated....The elevations weren't right and so it kicked a lot [of property]...into the flood plain and....nobody really wants to be in the flood plain very bad because you can't do any building or anything....On the flip-side, [an area] above Emigrant was in the flood plain [before] and when they redid [the designation] it was out of the flood plain....So, which one do you go by.....Trying to get flood insurance is a problem....They used the wrong formula...[but] they haven't really come back yet with anything new....The DEQ is involved, and the Corps, and FEMA as an insurance part....The interesting thing is the Corps of Engineers and the Montana State definitions of the flood plain are different....The boundaries...aren't the same....We don't really know [when they will make the final determinations]. It is still pending. I would guess within the next two to four years....Not having a flood plain [defined]...we have no idea what to expect from year to year, especially since we have been in a seven- to nine-year drought in this area. Water flows are much lower than normal and we don't have the flows like we used to have in the '70's and '80's. In '96 and '97 there were back-to-back flood years. That was a 100-year and a 500-year flood....The biggest issue is the flood issue not being resolved. (*Park County Local Civic Leader*)

The Corps of Engineers is determining the integrity of the levy. We have a levy that is questionable at best....[The levy] withstood two back-to-back 100-year floods, [but] they still question whether the integrity is there. If they cannot establish and guarantee the levy, it changes this whole end of town....[it] puts the whole end of town in a flood plain. There are a lot of houses involved. You can't build or rebuild in the flood plain. (*Park County Local Civic Leader*)

Our old maps are terrible to use and the new maps with elevations and overlays on aerial photos are so wonderful to use. What little we have been able to use them has been very helpful....[The maps] have to be accepted by the commissioners, and then they go to DNRC...then to FEMA, and then they have to review and put them on a rate map to

drive the flood insurance. Some of the meetings that are scheduled for approval are [scheduled] for 2008....It has gotten political. They have talked about moving the flood plain and it is a big financial burden on those people. (*Park County Local Civic Leader*)

With respect to the river, I am not panicked about the river in the next ten years. I feel pretty good about where we are going with the Corps of Engineer's works and that they will come up with some measures that will prevent big floods. I have also lived around rivers enough to know that sometimes a river will just jump. Unless you have 14-foot flood retaining walls, there may come a time...despite the best efforts...[when the river] will jump. That is somewhat incumbent on living by a river. I certainly realize it is something that we may have to go through. (*Park County Local Civic Leader*)

The City Commission's involvement in river issues is situational rather than long-term or programmatic. I guess our involvement with river issues is somewhat reactive because we get involved if there are problems, like the '96-'97 floods. (*Park County Local Civic Leader*)

I'm really hoping we get something in the way of creative solutions, something beyond the floodwall. I think the floodwall was the reactive solution to the situation—it's sort of a 1950's solution. And we know better now, we know more about rivers...[and] I don't think the existing levy gives much in the way of real flood protection. I think we're going to have to have some kind of engineering solution....In a perfect world [the solution will] involve some kind of service step-back, designated floodway, and flood plain area, versus trying to build a structure that would require a fair amount of maintenance on the City's part, and [that would] also be fairly destructive of the resources we have in terms of recreation...trails [and] amenities along the river. (*Park County Local Civic Leader*)

B. The Value of the Flood Plain and a Meandering River—Who Should Pay

I think at some point the government is going to have to be willing to step in and help the landowners along the river. That land has value, but it has value for many different possibilities, not the least of which is wetlands. The flood plain is what lets the river spread out during these floods. I think that there is going to have to be some programs where the landowners get some compensation [if they] allow the river to go where it wants to....And it has to be in the same context as if they are raising a crop. It has to be a long term agreement [with] the landowner, be it a rancher or a farmer or someone who bought in for aesthetic purposes. They need to be compensated. I don't know any other way to do it. The local landowners...don't have the means or the money to just donate that. That is what they are being asked to do now. That isn't right. (*Park County Local Civic Leader*)

The governor ordered a river study. One of our former commissioners was a member of that task group....They spent six years on it....They came out with a stack of stuff that deep....They talk about protecting this resource....They didn't want to armor banks and stuff like that. They want the Yellowstone to be free-flowing and let it meander where it wants. (*Park County Local Civic Leader*)

You try to protect [the river] as much as you can through setbacks and trying to maintain water quality, making sure it is used right....It is not just the river itself, but all the animals and the birds that depend on [the river]. And its watershed...[including] all of the streams. There are a tremendous amount of streams that enter it. (*Park County Local Civic Leader*)

You have to be careful...as far as setbacks and stuff like that. People living there don't want to see these big setbacks....Right now it is 150 feet. (*Park County Local Civic Leader*)

You get these people that are taxed as agriculture and it isn't fair because they aren't using the land for agriculture. They should be taxed as residential. (*Park County Local Civic Leader*)

[The task force] was a waste of money. They told us where the ripples are, and...told us where the river floods. Anybody who's lived here for more than two years could figure that out without a PhD.....I guess what bothers me about the task force is it comes back to the ranches should be the buffer zone....just let it flood over the ranch....Ag should not be the whipping boy....The sacrifices should not be borne by just the agricultural properties on the river, it should be borne by all, including the highways....Do we need to build a highway right along the river?...Or should we move the highway over a little bit [so we don't have to rip-rap it]. (*Park County Local Civic Leader*)

C. Dealing With Erosion—You Do Have To Be Careful

You do have to be careful when you rip-rap because you may protect yourself but you are pushing it to someone else....[and] pretty soon you would have a big channel if everybody rip-raps. Once you let one person do it, you start the problem. (*Park County Local Civic Leader*)

I don't know that there is a whole lot you can do [about erosion]. The river starts to move and...you can plant trees. That is probably what is holding the dike together right now. Tree roots are a great thing. (*Park County Local Civic Leader*)

There is only a certain amount of [stabilization trees will] do. You try and get willows started in a sand bar...sometimes that works and sometimes it doesn't. (*Park County Local Civic Leader*)

[People] have to actually apply for a 310 permit. Once they apply, the District Conservation Board will go out and observe, and look at the project and make recommendations, and either pass or ask for more details and a better plan....They try to re-vegetate everything now. They used to throw a bunch of rock over the edge. Now they are actually putting rip-rap on the bank. They aren't allowed to put it into the river. (*Park County Local Civic Leader*)

If one person rip-raps, the next one does, all the way down. It speeds up [the river]. They don't want that constriction....On the flip-side you have the landowners...that are subject to the whims of the river and that is their property that is being washed into the river when it creates a meander. It was kind of ironic during the course of that study that there was a house that was on a 100-foot high bluff, about 500 feet back, and during the major floods it undercut the bank so much they torched that house before it went in [the river]. It was pretty dramatic. It was even more dramatic the way the banks fell off....[The house] was on a big gravel slope....The river was so high it kept washing away that bench. It just gradually eroded that thing back hundreds of feet. (*Park County Local Civic Leader*)

[The river] usually takes from one place and deposits it somewhere else. That is one of the things about living on the river. (*Park County Local Civic Leader*)

I would armor the banks only in extreme cases of emergency....Otherwise we will be like the rivers in Oregon where it is armored all the way, on both sides. It is bad....I am against modifying the banks in any way except in extreme cases like to protect a bridge or somebody's house. I think that is the way it should be done. (*Park County Local Civic Leader*)

I think the river is threatened. We have rules, but we are only [a few] eyes up and down the valley. If it weren't for a lot of caring people, and a lot of snitches...[we couldn't do our job]....We need to update our regulations. We need to look at them and revisit them, and make more people mad at us. (*Park County Local Civic Leader*)

I would like to see some better science on the effects of hard armoring and rip-rap on the...fish production...[and] habitat areas [such as those created in] flood stage....We've lost a lot of that. (*Park County Local Civic Leader*)

Bank erosion is concern to the agriculture producer because it's taking away land. And then the free-flowing river advocates say the agricultural land should be a buffer...so the river can go where it wants to. But...different parts of the river have different erosion factors....The erosion is not really a big issue until you get below Pine Creek Bridge. Where the river tends to be flatter and it tends to erode, and if I had land on the river, I'd be very concerned about it and I'd want to protect my property...[People use] rip-rap or the hard facing...Soft facing is where you lay the cottonwood logs down and bury the cottonwoods so the roots face out upstream. That typically doesn't work here in a major flood. (*Park County Local Civic Leader*)

IV. Managing Resources—You Do the Best You Can

A. Make People Aware, But It's Difficult to Save People from Themselves

You do the best you can. People have the right to live where they want to live. I think there is a growing awareness that [rules sometimes] change. It is tough to deal with, but just making the people...more aware of the problems that we all face, and having them

taking some responsibility...[will] help make that change positive instead of negative.
(*Park County Local Civic Leader*)

It's difficult to save people from themselves, so I think that one of the most important things a governmental entity has to do is persuade rather than demand. And I think that's where the involvement in the decision making process is critical....You have to be open and receptive to public comment—you have to be empathetic without necessarily having to agree. And I think in the instances when we don't agree, you have to convey [that you are] understanding without necessarily being in agreement....The Corps, in the past, has not been as sensitive as they might have been in terms of conveying to the public that they are listening, not necessarily agreeing....[With] set-backs, you're trying to save people from themselves—it's a very hard sell. (*Park County Local Civic Leader*)

It's a real tussle sometimes between property rights and community values and who owns community resources. The river, like it or not, is fundamentally and primarily a community resource with very private sector edges, and that dynamic is not going to go away. The problems there and the conflicts are only going to intensify....I saw a really different dynamic when I worked in Colorado....They don't have the stream access law that we do....At least [in Montana]...there's a little bit more power held by the public than there would be in other places. The problem is how do you mobilize the public support for valuing the public aspects of this resource. I think there's not that realization that things could be different. And people have always lived within this environment in terms of river ownership, the public ownership of river rights, not understanding that it's not the common situation, it's very exceptional. (*Park County Local Civic Leader*)

To some degree the Corps has been maybe to quick to grant the permits for hard armoring without...necessarily educating land owners that there are alternatives. And I'd like to see that. There are certainly a lot of soft armoring techniques that are quite feasible and, in the long run, have lower maintenance [costs]. I think a lot of landowners, if they were aware of those options, might choose those [soft] options....I think we need to look at alternatives. (*Park County Local Civic Leader*)

The new people—whether they've bought five acres or 5,000—see the river as a beauty...They're more concerned with the overall beauty of the area and not so concerned about the natural resources...[such as] what grasses are growing there or what weeds are growing there....One of my goals, and I don't know if it's ever going to happen, is to bring their level of education up so that they can look out in a leased field and say, 'Yeah, this is good.' One of the goals on the flip-side is the cattle owner who needs to do a better job of ...monitoring the range....Ag Production 101, so to speak....[For some people] time is the most precious commodity....So if you're going to do a range management class for a recreational ranch buyer, it's got to be July 10th, but you wouldn't dare have [a class in July] for the natives...Then, [if you schedule a July class for the seasonal residents]...you get the natives saying you're being exclusionary. (*Park County Local Civic Leader*)

It takes some persuasion and education in terms of the public. The public is so used to thinking of the river as being something you need protection from and I think we need to understand that it is a dynamic resource, and we need to learn to live with that dynamism in a way that doesn't degrade the river in terms of fish productivity...aesthetics...natural functions...[or] seasonal changes. (*Park County Local Civic Leader*)

[The Task Force] was helpful because it opened people's eyes....Any publicity [showing] that we need to protect the river is useful. (*Park County Local Civic Leader*)

B. It's a Battle of Engineers—Go With the Winners

Every time you armor the bank it deflects the water to the other side. That has been going on for a long time. To tell people they can't do that is hard because it is hard to stop somebody from protecting their property. We do have some limits and recommendations to keep a handle on it. That is our flood plain regulations again. You can't excavate in the flood plain without a permit. We try and watch that. It is a battle of the engineers. We turn it over and let them fight it out and we go with the winners. (*Park County Local Civic Leader*)

[We might want to assume] people are rational actors, that they process things and they act in rational ways. Well, they don't always. A lot of times people will act in ways that are not only not maximizing their profit, but...they act contrary to those ways because...[their] biases and heuristics and rules of thumb...systematically, and very predictably, distort their perception....[For instance] someone buys property right on the river for the accessibility of fishing...then he puts a bunch of rip-rap down there to save his property....[The rip-rap] is damaging the resource in very predictable ways and diminishing his property values....[If] he'd built back, say 150 feet, [he would have] maintained the productivity of the river along that reach. So I think that's the heuristic that's based on ignorance of how the resource works, how the system works. So to that extent, education is helpful, but you also need persuasion in terms of the credibility of the argument. (*Park County Local Civic Leader*)

I don't know, at this point, what you can do other than encourage responsible planning...and really being careful if you allow somebody to rip-rap. You have to think about the consequences....Some of the biggest problems here are these old bridges that constrict the river. They need to redesign those bridges, of course it would be millions and millions of dollars. (*Park County Local Civic Leader*)

The models [are helpful]....They have this thing set up on a trailer and you...can put your house [in the model], and release the water, and see how well you did at protecting it. (*Park County Local Civic Leader*)

C. Nobody Sweetens Their Tea—A Community of Strong People

[In this] culture...nobody sweetens their tea. It's the attitudes. It is a very self-reliant culture....[an] everybody-takes-care-of-their-own type of culture. The view of

government out here is not just suspicious. It is flat out distrust. If government is involved, something is wrong....In other communities they at least give you a chance to screw up. Here they assume you already have and they haven't found out about it. (*Park County Local Civic Leader*)

Some of these people don't take no for an answer. Now, developers come and bring a staff of lawyers, hydrologists, engineers....They will come to the planning board meetings with their attorneys. They will set up their own sound systems so they can record everything. This is a kind of intimidation where they will sue you if you don't do something they want, 'We are recording every word that you are saying.' They have a whole entourage of people working for them, and you are one person, trying to do the best for the county, and you have to face their staff. That is how they are now....They will hire their own stenographers for meetings. They will go to the commissioners meetings when it is their turn to decide something. They intimidate....First they will try and schmooze you. They will put on a luncheon. If that doesn't work, they will get tighter and angry. Then come the lawyers. (*Park County Local Civic Leader*)

[Our former] planner....noticed the local people don't like the local people telling them what the regulations are, but if it comes from the state or the federal government they are fine with that. They don't want a local official bossing them. They feel [the local official] could be more biased than a state or federal agency....We get it constantly....If I can say, 'I have to administer [this way]...it's from FEMA and I don't have a choice'...then they say, 'Oh, okay.' (*Park County Local Civic Leader*)

Montana is interesting to me in that it goes beyond public information and public comment to public decision making. Folks don't just expect to know what is going on or have access, or be able to make comments, they expect to be seated at the table with the ability to put their hand in the air and cast a vote. I appreciate the interest that people have. It can present challenges if a lot of people feel like there has to be a consensus before a decision can be made. That can be difficult. (*Park County Local Civic Leader*)

This City Commission is a strange combination of being a very conservation-oriented commission, a very progressive commission, but also a very libertarian commission in that we don't take a leadership role in terms of development. We feel that [development] is an issue that should come from the community itself. And I think we act more as supporters and facilitators than we do as initiators. (*Park County Local Civic Leader*)

To some extent...irreconcilable situations occur when ideologies start from a position....and therefore [the person] only admits the evidence that applies to that position. I think that's the danger. (*Park County Local Civic Leader*)

We have a wide variety of land. We have wetlands, rock, high desert, whatever. We have it all. We look at access and all the different things that would go into making a piece of land livable. We review all the regulations, and someone comes in with an idea and we look at it and analyze it....It goes through the planning board and the commissioners and they get an approval....We enforce zoning regulations. (*Park County Local Civic Leader*)

We hand out the permits to develop along the river. We use the flood plain regulations. We see what kind of flood zone they are in. If we have a section of allowed uses in the flood plain....if it fits, they are eligible to apply for a permit. If it doesn't fit they can't apply for a permit. They can apply for a variance. (*Park County Local Civic Leader*)

There's a culture of property rights and courts and so I think that the County Commission is certainly faced with a difficult balancing act in making decisions regarding things like set-backs. (*Park County Local Civic Leader*)

Both [newcomers and long-time residents] are very protective of their property and they feel it is very valuable. Maybe the people that come lately are more staunch and have high expectations. Then again, the people that have been here a long time are set in their ways. (*Park County Local Civic Leader*)

County commissioners have a say. The planning people, but what it really takes is the people that actually live there to organize and protect what they have through zoning. The community leaders who are willing to get up and do something. That usually ends up a small group of people. Unless the people really have a strong feeling for starting zoning it takes strong people to get it all the way through. (*Park County Local Civic Leader*)

D. The Role of Development

From a recreational stand point, how many houses do you really want to see sitting on the river bank as you go floating by?...That is a resource quality that we take for granted, but it's not necessarily going to be here 20 years from now. We're seeing an awful lot of development right along the river and...I think that effects property values long term, it degrades property values. And it certainly degrades the marketability of the fishing experience for a lot of the river guides. (*Park County Local Civic Leader*)

Real estate agents...influence people. They want to have more lots to sell, and they encourage people to buy a lot that they can't afford and they say you can subdivide and the land will pay for itself. If you buy these forty acres you can pay for the five you want to keep by subdividing. They encourage development. They encourage people to sell their property. I think we have seen a feeding frenzy of these people that want to make a killing in land development and I think the real estate people have a lot to do with it. (*Park County Local Civic Leader*)

Some [real estate agents] support what I would call good planning. Some of them want to see a good community come out of all of this. They would support parks, or trails...the schools, [and] community building, as well as making money for themselves. A lot of them don't, though, and they only see the profit margin. That is one thing I like about some of the real estate agents is they do want to see a good community to leave behind.... I would say we have three or four local companies that do the majority of the business. (*Park County Local Civic Leader*)

Some of them don't think about the community. They only see the big money sign and that is what they are driven by....A lot of them are hit and run. They come and buy a piece of land and develop it and if it is shabby they are gone to somewhere else to do the same thing....That is what we try to fight....A lot of developers want to be cheap about everything they do. A lot even flaunt what they do...and think it is funny, 'We got one over on the county. I don't care about the future residents, I got my money and I am gone.' It is very tiring. (*Park County Local Civic Leader*)

Enlightened development...not only protects the river but that protects property values as well....There are other interests in the county, some real estate development interests...that have taken an opposite position and been fairly hard-line in saying that private property rights are, not only the most important consideration, but the only consideration....[But] we have a common interest—it's in maintaining the resource base we have here in terms of the river. The river is an amenity and it's an economic driver. I think that everybody realizes that at some level. And I think the only difference that we have is in terms of who owns that value....There's the side that places more [emphasis] on personal...[and the side that emphasizes] public--That's always the dynamic. (*Park County Local Civic Leader*)

E. If I Don't Do This, Who Would?

Maybe I would like to do something else. But...the thought goes through my mind, 'If I don't do this, who would?' There isn't anybody else....Other people [are now] working and learning...and thank, God. (*Park County Local Civic Leader*)

I feel I am a bastion of rationale in the midst of what is going on. I am trying to protect the area. I am trying to keep it clean and safe and see that the locals aren't run over. I believe in keeping the river clean and safe. It isn't for the money or the glory. I can affect some changes and protect some things. (*Park County Local Civic Leader*)

It is hard to change regulations. That is a hard thing to do. We talk about rewriting the regulations, but that is a scary thing. People go ballistic. Not because of logical reasoning, it is because they don't want anymore regulations from the government. It ends up in the same kind of fight. (*Park County Local Civic Leader*)

When something happens out there and they come and say, 'Can't you do something about it?' And we say, 'We have no regulations.' We just need to balance regulations and rights....Right now [the community is] so anti-regulation....[but] we need more effective regulation. We need rules...that have some teeth. The things that are in place...we need help enforcing. You are talking 2700 square miles, 14,000 people, and [a very few people to watch] the rivers, subdivisions, and drainages....If we didn't know people as well as we do, we would have a hard time. (*Park County Local Civic Leader*)

As anywhere, [we have] a very complex stew of interests. I think the County Commission that has a lot of power that they are reluctant to use because [they are] balancing interests. I think you've got some fairly enlightened folks on the County Commission, I think that

they're only now gaining enough confidence as a commission to take steps to protect the river. (*Park County Local Civic Leader*)

[Agriculture needed a voice on] the Yellowstone River Task Force...[Also, with] county commission meetings and subdivision boards, an agricultural entity needs to be on the board. Obviously the Conservation District [includes] agricultural people...[I] even suggest that they become members of environmental groups to know what they are doing. Or, at least go to their website once in a while and look at their mission. You know, Trout Unlimited, Montana Water Trust, Greater Yellowstone Coalition, and Park County Environmental Council...[Agriculturalists] are not really receptive [to the suggestion]. They're nervous about it. It takes a lot of time, obviously, and...typically it's only the larger operations that have employees or family members to pick up the slack. (*Park County Local Civic Leader*)

F. Comments and Lessons For Non-local Regulators

The state and federal government input needs to be sensitive to the local commercial economic needs...[and] the concerns of residents, especially on the east side of town that are currently at risk of either flood damage or having to leave their homes. And one of the options in that 205 study is a buy-out...I think that those kind of options certainly need to be discussed in a way the community is comfortable with...We've seen cases in which there were decisions made at the federal and state level that appears to be made at the city level. The city government takes a lot of heat for things that have actually occurred in a different level of decision making...I think it needs to be a process by which there's not just a public meeting, it needs to be a neighborhood by neighborhood communication [process]...Convey [information about the risks] in a way that's understandable and a way that allows participation...both directions, from the residents to the governmental agency, and vice versa. I think that all too often the government agency does the research and makes a decision on their own, and then conveys their decision to the public. There doesn't seem to be a lot of opportunity for public participation in terms of understanding. (*Park County Local Civic Leader*)

The most important thing is to be proactive and not assume that problems will solve themselves. The only thing that happens with that passage of time is the two sides of the issues become more concrete in their positions and less willing to look at the common elements of interest. So if I were to talk to someone in a county that's maybe twenty years behind where we are in terms of growth...[I'd say] start from the perspective of trying to determine what values are generally held in common by the whole community. Work with those commonalities and keep the focus on the commonalities...It won't [necessarily] prevent the polarization, but it will certainly keep people focused on avenues to solutions that recognize commonalities. (*Park County Local Civic Leader*)

Local government builds roads, hires the police and fire department, and provides water systems. In my opinion local government has a narrow scope of activity. Then it has a scope of what I call cheerleading and encouragement of private sector development and issues. There is no escaping the river and the big part of what the city is. We just simply

do not have the resources and the funding and the expertise to become river management agencies. I feel like that is one of the expectations that some of these groups have. There was one group in here not too long ago and they wanted a best management practice...on how the culverts would go in [a local creek to see] if a fish could swim through....To me that goes beyond the normal expertise that you should expect in local government. We don't really even have a storm water system. To start on one end, and say we should have best management practices about the pipes that are going into that creek, when we don't even have a storm management system...[makes no sense]. When it rains, it starts at the hill and runs down. I am still struggling with the idea that local government should be involved with the environmental issues to a greater scope...because we honestly don't have the time or the expertise or the resources to do that. To put that burden on the local government of 7,000 people or a county of 17,000 is extremely unrealistic. (*Park County Local Civic Leader*)

Sometimes the information that comes from public agencies, governmental agencies, is suspect. At least that's the perception. And I think that there is also a perception that the best practices benefit the public at large, but they may not benefit me personally from an economic standpoint. And I think that's where the persuasion comes in, demonstrating how those incentives really work on a personal level....People know what they know, and how do you get through that. (*Park County Local Civic Leader*)

I think that [the Yellowstone River Conservation District Council] has a lot of opportunity. The thing that they have to avoid is looking like they're a gorilla....[Avoid] breeding defensive reactions....Work at a community level and genuinely engaged people. It sounds like such a simple thing, but it's all too rare that an agency genuinely appears to show concern for folks....Encourage people to define goals and force some rationality that wouldn't otherwise be there....offer guidance in terms of what works mechanically and what works within the framework of the river as a river. (*Park County Local Civic Leader*)

One of [the local groups] is Concerned Citizens of Park County. That group traditionally hounds the city more than the county. They tend to show up on a lot of different issues....They are loyal to their community, but they are 'opposed.' Whatever the issues are, they are 'opposed.'...[Then] you have a definite environmental group. There is the Park County environmental group that gets real involved in those types of issues....I think they are helpful in the sense that they create a perspective.....The other group that shows up is not organized and doesn't have a membership list, but would be what I would call the 'Native Montanan' group. The first two groups include native Montanans, but they also include folks that aren't....That third group tends to be the people that have lived here year-in and year-out for decades. They tend to be tied back to the railroad, and they tend to be the don't-get-in-my-way-I-won't-get-in-your-way sort of folks. They aren't hyper-environmentalists or hyper-development people. Their families have ridden the waves for generations in Livingston. There is a stark contrast between those that have been here for generations and those that haven't....They tend to be more in the middle. They would be the folks that wouldn't want to see you cut down all the trees for the sake of cutting down all the trees, but they might have family members that work in the timber

industry. They kind of have this balanced approach, whereas a lot of times the ones that you hear from are on the extremes: you shouldn't cut down any trees, or you should give me a license and a chainsaw and let me cut down whatever I want. (*Park County Local Civic Leader*)

It goes beyond, 'I want to know and I want to be able to see the documents.' It's, 'Well, we haven't had much public participation on this,' [even though] we have had three public forums. There is a redefinition here about how far the public should be able to insert themselves into a decision. (*Park County Local Civic Leader*)

They definitely know each other. They don't tend to fight with each other that much but they also don't seem to have any informal alliances...Even on an issue of common interest, they tend to come and take their own position, not hook up with somebody else and form a coalition. (*Park County Local Civic Leader*)

I think development gets a bad rap. I think that a lot of things get blamed on development when [those things are the results of] the river. Rivers are what they are. They change, they move. If you take an area around Livingston and develop away from the river, that doesn't leave you with a whole lot of land....[The Corps wants a] safe-zone around rivers where nobody can develop in and no activity can occur, and I find that very unrealistic....Groups like FEMA and the Corps, and the outside groups,...are willing to cooperate as long as they get their way. They come with such an agenda that I don't trust. (*Park County Local Civic Leader*)

It seemed like there were a lot of different interests [on the Task Force]. Maybe [they needed] a tighter agenda. They had people coming from all different walks and concerns. You have people that make money from it and guides and developers and you get the people that actually live there and have lived here for years. It got quite dicey at times and it got hard to stay focused on what the job was....Everybody had a different perspective. Very strong opinions and all different opinions. You can't put a label on anybody. There were ranchers, sportsmen, developers, environmentalists. They all had very different ideas. Their meetings would go until 2:00 in the morning. Everybody had to say what they had to say and they would go on and on and on. (*Park County Local Civic Leader*)

[Non-locals should] remember that at the same time that all of these decisions are being made about management of the river, that there is a community here—a community that gets up everyday and goes to work, lights that have to get turned on and off. Don't get so overwhelmed with the issues of the river that you forget that there are people that live next to the river. Some depend on it for economics. Some of them don't. (*Park County Local Civic Leader*)

Springdale to Gardiner: Recreational Interest Group Overview

Interviews were conducted with sixteen individuals in the Springdale to Gardiner area who use the Yellowstone River for recreational purposes, including hunters, fishers, boaters, floaters, campers, hikers, bird watchers, rock hunters, photographers, guides and outfitters who use the river for relaxation and serenity. Participants were recruited from referrals provided by members of the Resource Advisory Committee of the Yellowstone River Conservation District Council. Participants were also identified and recruited by contacting various organizations such as Ducks Unlimited, Trout Unlimited, and the Audubon Society and by contacting local outfitting businesses.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|---|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Springdale to Gardiner: Recreational Interest Group Analysis

I. Valuing the Yellowstone River

A. The “Magical” Yellowstone River

The word Yellowstone is a very magical word. But ...when [the] Yellowstone is threatened there is an incredible rally worldwide. When you talk to people from elsewhere it means the last free-flowing [river], the last preserved river. (*Park County Recreationalist*)

Little slice of heaven. (*Park County Recreationalist*)

The river itself is a big freestone river that can be extremely moody. Sometimes the fishing can be productive and sometimes it can be tough. You think you can be a smart fisherman and sometimes it doesn't work that way and the river teaches you a lesson. (*Park County Recreationalist*)

We [can] live in a small rural type environment...still have frontage on one of the major fly fishing rivers and the Yellowstone obviously is one of the prime Blue Ribbon streams...[and have].. Just more large ranches, more open country...more of a ranching character...It's a good place to have your coffee in the morning. (*Park County Recreationalist*)

[It is a] good place to start your day. If you can't be happy looking at that, you just don't deserve to be....It's a good place to get old. (*Park County Recreationalist*)

It's always changing because it's a wild un-dammed river...And it's beautiful of course, I mean it's gorgeous, especially I'd have to say...around Springdale [and on towards the] east is my favorite because it's not developed. You can still float through that area...it's all big ranches, it's not a bunch of houses on the river so it still looks like maybe it did 100 years ago. (*Park County Recreationalist*)

If you live on the banks of the river, it's a jewel, it's a free river....take care of it...it may be a little battered a little worn, but it still deserves a little TLC. (*Park County Recreationalist*)

One of the few [rivers] that flows north in the world. (*Park County Recreationalist*)

Hopefully into the future, this river will throw a flood every now and then and will astonish everyone with its power. (*Park County Recreationalist*)

[The Yellowstone River is] temperamental. You can go out there today and just have an incredible day, 60 fish a day, go out there tomorrow, [into]...seemingly the exact conditions, use the same fly, and you'd think there wasn't a trout in the Yellowstone. (*Park County Recreationalist*)

B. The River as a Refuge

First and foremost probably the fishing, the quiet, and some days the hunting, some days just sitting on a rock,...it's just a wonderful beautiful place to be and...I'd have to say just the quiet natural beauty of the place is what draws me to the Yellowstone. (*Park County Recreationalist*)

It is a totally spiritual connection....[There is] nothing better than being able to be down at the river...I don't go to church, but I definitely go fishing....I'm not a heathen or anything...But yeah...every day you spend fishing you add a day to your life; so I'm doing all right. (*Park County Recreationalist*)

When I got into fly fishing that's when the whole catch and release really hit....It's more about the whole process rather than just catching fish; just being in the mountains; seeing wildlife...One of my favorite quotes is, 'Some go to church and think about fishing, others go fishing and think about God.' (*Park County Recreationalist*)

It's a pleasure [to live by the river], I don't even like to go on long vacations. (*Park County Recreationalist*)

I've been all over the world, and this place is about as good as any, I love the peace and the quietness, and close to Yellowstone Park. (*Park County Recreationalist*)

Not just the fishing, people come just to float, to walk by it. We have a bench down there by the river, they come down and sit and just look at the river. (*Park County Recreationalist*)

The scenic beauty of it is dominant, and you can see that with the gold and yellow colors and the acreage that we have along the river we try to keep it as quiet and peaceful and be the best stewards for the Bed and Breakfast guests and the tourist guests that we have...they too have the tranquility and the beauty of the river, and the peace of mind. (*Park County Recreationalist*)

The Yellowstone [River] is my cathedral, that's my church, that's my spirituality, ...it's where I charge my batteries. It's my connection to the natural world. (*Park County Recreationalist*)

C. Free-Flowing and Natural

It is the longest free-flowing river in the United States and it should be maintained as that. (*Park County Recreationalist*)

It's the longest flowing river in the United States without a dam on it...when it's clean, it's clear, it is a beautiful river. (*Park County Recreationalist*)

I describe it as the longest free-flowing river in the United States. It is pristine. It is clear. It is fast flowing and the surrounding areas are beautiful. I say we're in Paradise Valley and that's aptly named. (*Park County Recreationalist*)

One of the things that is going to be one of the most difficult hurdles to get over is recognizing that even with landowners that have a vested interest that there will be situations that allowing the river to function in a somewhat normal or natural way is still important. (*Park County Recreationalist*)

This Yellowstone River is the longest remaining free-flowing river in the lower 48 states. It's...unique in that sense. (*Park County Recreationalist*)

D. The River's Resources

Superb trout fishing...and none of those fish are bred in a hatchery... Every fish is wild, stream bred, wily and smart. They've made their living there since they were an egg....they don't fool easily... And there's a huge difference in wild fish and hatchery fish, just no comparison....The fly fishing paternity generally refers to hatchery trout as rubber trout. (*Park County Recreationalist*)

We have deer, whitetails, muleys, an occasional moose, occasional bear....Lots of eagles, lots of ospreys; ...the river holds all that here...it's kind of a nature preserve right there that keeps a lot of game close by...An unofficial nature preserve. (*Park County Recreationalist*)

The Yellowstone...[is] famous for its hatches of bugs. The caddisfly hatch in late April early May is called Mother's Day hatch and it's world famous...and also the salmon fly hatch. (*Park County Recreationalist*)

I do feel like we have a fairly healthy river system. (*Park County Recreationalist*)

The river corridor is basically the river and its surrounding lands, the whole riparian area...it's not just the river, it's the trees,...animals,...insects,...birds, the worms,...the dead leaves that fall on the ground.... 90 percent of Montana's nesting birds use riparian areas, close to 60 percent actually lay their eggs there....If you fly over in a airplane, you look down at the Yellowstone River, you see this big green lush strip running through the countryside. (*Park County Recreationalist*)

Tourism is I believe the second biggest industry in Montana....tourism relates to the beauty of that river out there and the fish in it. And people come here and spend their money going fishing and hiking and camping. (*Park County Recreationalist*)

We have three osprey nests...and they have three young ones every year....We have eagles all year long.... Without the river, we wouldn't have the osprey, we wouldn't have the eagles, and we wouldn't have a lot of things. (*Park County Recreationalist*)

They know it's a world class, classic fly fishing area. (*Park County Recreationalist*)

I think the Yellowstone River is...the center of this valley...if the Yellowstone isn't in good condition, this valley is going to deteriorate very quickly. (*Park County Recreationalist*)

Open space is so important along the river. (*Park County Recreationalist*)

The river corridor is exciting. I often get excited seeing a family of river otters or the deer getting a drink....I think clients get excited and remember that as much as the fish. (*Park County Recreationalist*)

This river is a tremendous resource for this state, for all the local people here...for people who don't have money; who aren't the lucky people who own a piece along the river...that's the message. (*Park County Recreationalist*)

We try and keep a little control on the beavers; put chicken wire around some of our favorite trees. Those cottonwoods along the river are very important. (*Park County Recreationalist*)

E. Human-River Connection

It's spiritual...speaking from a fly fisher's standpoint...fly fishing is definitely a challenging way to catch fish. You need to be a weather man;...be an angler; ...an entomologist; ...a water chemist; ...a little bit of everything so you're in tune with your surroundings...People...that fly fish are informed...and probably lean pretty heavy toward the conservation side of things....There's a lot of people that practice catch and release...[they] tend to put a lot of their own time volunteering for conservation programs [and] for education programs. A lot of their money also goes back into preserving those places too. (*Park County Recreationalist*)

When I'm fly fishing, ...you seem more connected....especially with entomology because you have to know...what the fish are eating. You have to look in the water, look under rocks and it's all about...matching the hatch....The quality of life in the river, it all starts with the plants, the tiny bugs eat the plants and microorganisms, fish eat the flies and bugs that eat them. It's just that big huge food web. I think fly fishermen tend to have more of a sense of connection with that web. (*Park County Recreationalist*)

We're on the river a lot with our students whether it be fourth graders or eighth graders...teaching them about the river....if they get out of one of those lessons that water quality effects...the bugs and bugs effect the fish...if they're somehow connected to the fish in Montana, somewhere for the rest of their lives they'll be more apt to join a

conservation program...or even just recycling to make the water clean. (*Park County Recreationalist*)

People tend to know here they are connected by the water. (*Park County Recreationalist*) It's a privilege to share it [the river] with others, we enjoy the cabin over here and a cabin here...we have tourist homes and the quality of people we get, it's so rare that you get a lemon. Makes you believe in the world. (*Park County Recreationalist*)

You're dealing with a raw force of nature...this river...it won't tell its secrets....you turn those rocks over;...you find those nymphs; ...you watch the river year round...You put it all together and after three or four years of study, the river might just give you a trout or two...but...by then it becomes not a matter of catching fish, it becomes a matter of you're...one with the river... it has different character around every bend...it acts different in the spring than it does in late summer, it's different in the winter, it's an incredibly complex ecosystem, that if one person in their lifetime can figure out a little bit of it, it's quite an accomplishment and that's what transcends the actual fishing. (*Park County Recreationalist*)

II. Shifting Scenery: Development Along the Riverbanks

A. Homes on the Riverbank

If we're not careful it's going to look like a bunch of squatters all the way down [Highway] 89. All the way along the river, it's going to be ugly. (*Park County Recreationalist*)

These people have built beautiful homes. They're not junky. They're beautiful but there are too many, too close to the river. (*Park County Recreationalist*)

I think one of the things that we see more is encroachment of development in the river corridor....Now you see a big house on the skyline instead of a natural habitat. (*Park County Recreationalist*)

In the long run I think that it is not the Ag community that is detrimental to the river. It is the development along the river. That is why I felt like we needed to band the ranchers and the environmentalists together. That way we preserve the open spaces. (*Park County Recreationalist*)

Back in 1968, there was a big effort to dam the river...three guys...stood up against some real moneyed interests...But one of the ways that they decided in the aftermath of that battle that the Corps of Engineers wouldn't be able to revisit that plan is to bring people in; get some houses down there. There's a lot of ranches. Get some houses down there because that will increase property values and help make it financially preventative for anyone to say, 'Ok we're going to dam the river.' So I think we're starting to become a victim of that success....I've...seen more and more development right on the banks. (*Park County Recreationalist*)

The land values are such that...It makes that river corridor the domain of the upper class. (*Park County Recreationalist*)

I keep telling people...in the early 70s the dam was really proposed.... and this is where you make the tradeoffs in life. You only had to buy about seven ranches and you had most of the land under the area where they wanted the dam. We need more people out there. Do I prefer more ranchland than people? Yeah, otherwise we might not have the river. I decided that we needed more people out there because they won't dam it. It would cost so much. (*Park County Recreationalist*)

From the overlook...20 years ago there was a small handful of lights from the valley floor at night. That is not the case anymore. It is no longer a farmstead here and a farmstead there. It is a community today. (*Park County Recreationalist*)

B. Housing Developments Threaten Water Quality

Of course you've got septic tanks and lawn fertilizers and the cutting down of the trees. I think that development is probably one of the biggest things [and] one of the main problems...on the Yellowstone. (*Park County Recreationalist*)

Development brings sewage...my neighbor...[has] the sprinkling system, [he] waters that five acres every night and then he puts chemicals on there to keep the dandelions down...and all of that is just going right back into the river eventually and into our aquifers. (*Park County Recreationalist*)

We have a cabin here that we rent to people. And every once in a while my husband will say we should build a couple more and I say, 'I will not....that's more sewage on this small plot.' That's not being a good steward of the land that we've been given. (*Park County Recreationalist*)

It's not great for the riparian area where someone has cleared the vegetation of the river down to the cobble of the riverbank and then mows their lawn down to that point. (*Park County Recreationalist*)

People say they are polluting badly but I don't have any proof of that. (*Park County Recreationalist*)

C. Setbacks: Benefits and Impediment

Have those homes set back from the river...this was the last best place in Montana and it's been discovered, so you've got to have rules. (*Park County Recreationalist*)

This county is going to be subdivided. There's not any way of stopping that, but I think we should have 200 foot setbacks on the river both for the houses and for the septic tanks and drain fields. (*Park County Recreationalist*)

How do you set an arbitrary 300 or 500 feet? It has no bearing on the river. We have a 300 now....These arbitrary lines don't make sense...They have a 500 foot in Madison Valley but they seem to give exceptions all the time...If you think of how different rivers are, you need to do it by reach tide. (*Park County Recreationalist*)

[Setbacks,...]That should be an easy answer but it isn't....we are concerned with the function before the aesthetic wants....Knowing that in some areas there may not need to be a setback at all. In other areas there may need to be 500 feet or half a mile depending on what you want to maintain. As you come to the lower end it meanders a lot more. At the upper it is naturally armored and doesn't meander as much. Since we are heavily dependent on tourism the aesthetic qualities are very important for the floater and the fisher people. (*Park County Recreationalist*)

We [are] recognizing that a pretty big part of the economy is based on real estate. The one thing that would be nice [is] to...get people to recognize...that...as we deal with private property rights, ...if we are able to preserve something of the valley, property owners are not going to be on the losing end... It is a lot nicer to float through stretches where...someone isn't riding the lawnmower around the lawn ten feet from the river.... If we are able to preserve some natural character those property values will go up and not down. We need to get people over the social hurdle and they realize that is true. (*Park County Recreationalist*)

D. Growth Policies: Benefits and Impediments

The real-estate developers...know it's wide open...there's no constraints on developers and I think that's holding a knife to the heart of the Yellowstone...there's no plan. The county planning commission is populated by real estate developers... I see a very deep connection to the river of all of the people here, but nothing that says, 'Wait a minute this is a real gem and let's keep this at least like it is, without further degradation.' (*Park County Recreationalist*)

The real estate developers have a huge amount of power both in the property and the way they market them and how they are organized....We have this huge issue between these people that can't see the change and are unwilling to accept the adverse change and the people who say it is going on other places and we need to stop it right now. Both sides have these real knee jerk reactions. (*Park County Recreationalist*)

Part of the draw for being here is you want to be in a rural ranch type community, so the goal of this thing [growth policy] is obviously not to put the ranchers out of business and not to regulate to the fact that they can't make a living. (*Park County Recreationalist*)

It was a classic case of public participation. A bunch of the landowners didn't participate and then they saw it and went bananas and they got it repealed... It is a tough one. You have these landowners....They can't make a living ranching and we are asking an awful lot of them to not cut it up. If somebody wanted to buy my business we would sell it for as much as we can. (*Park County Recreationalist*)

I was on the growth policy committee...the discussions came down to when it was all said and done, property rights...not the general good, but what should happen in Park County to keep it afloat. Do we admit that most of the dollars here come from tourism? Do we admit...that the people moving into those properties with bazillion dollars...don't have much concern for the local economy...? The schools suffer,...the whole structure is tricky, and the ranchers know that... And so...to protect the river,...the open space... You're asking them to admit to something that is hard to do, that it's no longer an agrarian society because it truly isn't for very many people, and that's the good and bad news. (*Park County Recreationalist*)

Personal property rights, ...Every thing begins and ends with it. And it's part of the western independence that got everyone here in the first place, the rugged individualism that we all applaud, and the inability to let go of any little bit of power that people feel they still have. When you think about it, if you were one of the families that fought Indians and put up with all the hardships that settling a place like this took in its very recent history...it would be awfully hard to let somebody from Seattle come in and [they] say, 'Well by God nobody's telling me [what to do].' And I understand that, but it just doesn't work. (*Park County Recreationalist*)

Private property rights are very important to these people and I can understand that but I think my property will be de-valued if the next guy doesn't take care of his property. So it's not just a one person street, the whole community has to get together on that. (*Park County Recreationalist*)

And the big ranchers are going to sell out anyway, because there's too much money to be made if there aren't some kind of restrictions on what can [be] buil[t]. (*Park County Recreationalist*)

If development is left without checks and balances, it could totally ruin...the river, not only aesthetically, but also biologically. (*Park County Recreationalist*)

It took three years at least of really difficult meetings to come up with a plan for Park County that was a comprehensive plan...the only way they were brave enough to approve it was to specifically preclude any zoning...it was all about private property rights...there's many people who don't like planning, think its sort of a communist plot; it is breaching their private property rights. Well I also own private property...I see it as...a balancing between my rights and my neighbors rights, and...if the neighbor does something that is really obnoxious to me, do I have any recourse?...So I view it as protection of private property rights...and others view it as an infringement. It's a fundamental difference in outlook. (*Park County Recreationalist*)

Growth is going to happen and it should be done in a smart, well-planned manner....If we had done that it would be a different footprint here today. (*Park County Recreationalist*)

What is the viewshed? Is it to the mountain top? We haven't defined the viewshed. It is different through town. You have a high bluff and cottonwoods and the viewshed is right

there...I would like not to see houses...The conservation easements are a way. We have been trying for years to get the viewshed bought over across from Livingston and now it is being subdivided...there is no money for viewsheds. The viewshed is more social in my mind. (*Park County Recreationalist*)

Anytime the public makes a decision that affects a private person's right, the private person is going to bear 90 percent of the burden and the public gets 90 percent of the benefit. That is tricky....Hopefully you get progressive landowners or you do it by fiat. I think you just kind of muddle along and hope that you get landowners that are willing to sacrifice a little to promote the well being of this area. (*Park County Recreationalist*)

I think it is still in danger because there is no zoning whatsoever. I don't think most people realize that Wal-Mart could buy a chunk of land down here and there isn't anything we can do about it....I am not someone who likes to see a whole pile of regulations but I think there has to be some regulation with development. (*Park County Recreationalist*)

People...on the growth policy did not want even to mention those words [conservation easements]....they say, 'They're telling me what to do with my property.' But I can't tell them what to do with their property. A conservation easement is all voluntary..., we [should] suggest to people that that is an important thing. We have a conservation easement across the river from us. That's what sold us on our property because no one is going to build over there. (*Park County Recreationalist*)

[The] lights that are on all night long [distract from the beauty of the valley]...we need to have night sky here. It's part of the beauty of being out here. And again that goes back to the private property rights. People don't feel that they should adhere to that. (*Park County Recreationalist*)

III. Access Dilemmas: Demands, Limits and Controls

A. Increasing Uses and Overcrowding

The proximity of other users of the river...doesn't affect us that much, but it's always a factor living along a free body of water like this. (*Park County Recreationalist*)

It's busier. (*Park County Recreationalist*)

People complain about overcrowding on the river. I just smile because it is more friends of the river....They only come when it is hot. The rest of the year we have it to ourselves. (*Park County Recreationalist*)

It is not just all the Bozeman people coming over to fish our water, it is now the inner tubers and the kayakers and the canoeist, it really becomes impractical to try and fish. You can't expect a fish to eat a dry fly if they have just been run over by 50 drunk college kids in inner tubes. (*Park County Recreationalist*)

The fishing is as good....The quality of the experience has degraded. We see a lot more people on the river than we used to.... It is good for businesses like ours that are in the fishing business but it doesn't make it as much fun. (*Park County Recreationalist*)

B. The Importance of Public Access Laws

I know that there are some disagreements...with fishing along private property when they [guides are] fishing along. But actually in Montana you have a right to be on up to the high water mark. (*Park County Recreationalist*)

Having all of these access points is a good thing...you don't have to be the monied gentry to get to the river and enjoy it. And our stream access law allows...you [to] walk up and down that bank a little bit and you can fish and that's a great thing. (*Park County Recreationalist*)

I have been involved in the fly fishing industry all my life....those access points are crucial to my business and my soul. (*Park County Recreationalist*)

[Ranchers] have sold...the hunting and fishing rights to corporations or private concerns and so only those people can hunt and fish on their property...it's harder for my husband now to find a place to hunt. (*Park County Recreationalist*)

C. Decorum: Respecting Others and the Resources

I have a lot of respect for our river guides, almost all of them are stewards of the river, the land...They pass that along to the fishermen as well. (*Park County Recreationalist*)

There was a motor boat that came screaming up the river and that really put a burr under my saddle...they...just totally put all the fish down and it was so loud and that's the last thing you want to hear...you know the river's not mine...it's not anybody's really...I think they should be able to use the river...as long as they're responsible while they're out there and courteous of other people. (*Park County Recreationalist*)

I think we're very fortunate here that we cannot have motorized boats. (*Park County Recreationalist*)

I don't see fishermen leaving trash. Once in a while you'll see some, but basically your guides are good; your fishermen are good caretakers. (*Park County Recreationalist*)

I've seen many times where a guide will stop his boat and jump out and pull a beer can off the bottom. You know it's a small gesture, but you don't see tin cans on the side of the river. (*Park County Recreationalist*)

Lot of landowners have a problem with [stream access laws] and it's because some of the public is thoughtless and abuse...the river and therefore are abusing the landowner who

abuts the river, and that's a little flaw in human nature that's pretty much a constant. (*Park County Recreationalist*)

IV. Ideas About Erosion and Rip-rap

A. Erosion is Not Necessarily a Problem

There was a time when a property owner was at a loss but to just accept the influence of the river and they just accepted it....I guess there is a certain communion with owning the land and understanding how it works and knowing you take the good with the bad. The river changed course and I lost that bottomland but at some point I will regain it. It might not be my generation; it might be through my kids. (*Park County Recreationalist*)

We have a little erosion every year...There always will be some erosion inevitably. (*Park County Recreationalist*)

B. Rip-rap and Its Effects

Do you rip-rap the south bank and leave the north bank natural? It is a slippery slope. Once you go there it exacerbates itself and it changes the ecosystem and there is no going back. (*Park County Recreationalist*)

One of the saddest things about the Yellowstone is you go down between Hysham and Forsyth and there are some of the most incredible cottonwood forests you have ever seen. I would assume it was here too. That is the problem with rip-rap: you get the floods coming over the top and they don't get re-seeded. (*Park County Recreationalist*)

It's not great for riparian areas when you have a rip-rap bank. That wrecks it. (*Park County Recreationalist*)

When you channelize the river, it takes away its wild characteristics....but every time you stabilize that bank, you tame the river more.... the Yellowstone isn't allowed to spread out...it stays in one channel and it just digs a big deep trench over the years....a lot of people think [rip-rap] provides great habitats for fish [but]...the fish studies that have been done have documented that surprisingly the [smaller] fish aren't there like they thought they would be. (*Park County Recreationalist*)

[They] put the rock in and forced the river to come over to our side. (*Park County Recreationalist*)

You armor these banks, you lose some of that wildness, and it has predictable effects... the water ricochets to the other side...and usually increases the speed. (*Park County Recreationalist*)

The full force of the river came straight into that area and came over the banks and basically washed into the creeks...the sediment...silted in the spawning habitat, a lot of

the macro-habitat...their good...aquatic plants, a lot of that stuff got washed...out...and it took quite a while for that to regenerate....They decided to reinforce the banks so that the river couldn't do that again...they really armored the banks with huge boulders the size of Volkswagens and they are trying to keep the water out of there. And there was a lot of animosity from people both ways from people who want to protect it [and those who oppose rip-rap]...but the spring creeks...bring a lot of money into Livingston. (*Park County Recreationalist*)

In terms of long term health of those spring creeks...any time we clean the gravel no matter how we do it, the fish respond, the insects respond and the fishing is better....What would be nice is if we could mimic the natural flooding and wash all the silt out and that appears to be the natural cycle on a spring creek. Instead we have armored the banks and done everything possible to keep the river out. (*Park County Recreationalist*)

The flood of 1996 took out Armstrong's Spring Creek. I was the one that said they couldn't do what they wanted to do. It was bad...Then it hit the press and they finally brought in experts. The landowner spent \$800,000 [on rip-rap] and it washed down the river in four days. I lost a lot of business because I stepped on the fishermen toes. They wanted it back at any cost. My family has been involved in stuff a long time and people hurt, because it was \$100 a day to fish the spring creeks. (*Park County Recreationalist*)

The Yellowstone left to its own devices would take care of itself because it is a wild river, but if you continue to rip-rap it...it can't handle that amount of rip-rap. The river goes where it needs to go, and when you change it, it doesn't just affect the flow, it affects many, many things ...It reaches a saturation point. (*Park County Recreationalist*)

C. Alternatives to Rip-rap

So what's our puny little efforts to control the river and keep it from your house? Your house should not be built in those flood plains, or if you're going to build it there, you have to be willing to let it go. And letting it go has some consequences too because you're putting all that stuff in the river if your house goes downstream, besides being expensive and stupid. (*Park County Recreationalist*)

My preference would be that it would be nice if we didn't have it [rip-rap.] (*Park County Recreationalist*)

I kept throwing at ranchers...that conservation is nice...[It is nice] to do as little as humanly possible and to be economically conservative as well as environmentally conservative, [to] not immediately thinking you need to throw rock at the river to solve the problem. If we are able to preserve some natural character those property values will go up and not down. We need to get people over the social hurdle and they realize that is true. (*Park County Recreationalist*)

Up here they are putting in 40 foot barbs....they could be much shorter.... they become a navigation hazard [and]....They are certainly ruining good fishing banks. (*Park County Recreationalist*)

Try to use natural solutions first as far as planting things.... Layering the bank, anchoring root wads in the bank. (*Park County Recreationalist*)

I'm just glad they finally decided not to use car bodies anymore [for rip-rap]. You still see a few of them when you go down...We just have to learn that this river will not stay pristine unless we take care of it. (*Park County Recreationalist*)

D. Governor's Task Force

The Governor's Task Force...came together [because] we had seen a lot of bank stabilization projects without a lot of planning in my view. (*Park County Recreationalist*)

I think you need to try your best to go way out of your way to make sure the public is brought into the process as much as possible. (*Park County Recreationalist*)

I suppose there's...more awareness...about stewardship of the river....We've gone to a few of the meetings down there, watershed meetings and you'll always get a few diehards that are not open to change. It doesn't seem like they've progressed very far. (*Park County Recreationalist*)

I thought it was interesting when they talked about the studies of the cottonwoods and you could see where the river was by where the cottonwoods are....it was good conversation between groups: environmental groups, government groups, the Corps [of Army Engineers], ranchers. (*Park County Recreationalist*)

My sense was that we were going to try and move toward some kind of census on how the management of the river would take place. I had hoped we would move towards that and I don't think we ever got over the polarization of the reality community, and some of the bigger ranchers...primarily because they are concerned how private property rights are to be handled....I think it boiled down to the fishing community and the environmentalist community..... It was a little disappointing to go through that long of process and not have much common ground. (*Park County Recreationalist*)

We got a lot of data and a lot of discussion. If we have another flood we will be light years ahead. (*Park County Recreationalist*)

I think we funded a lot of good research...and the findings will be useful. At least there is better information than those kinds of polarized conversations. There is more information for those on either side. (*Park County Recreationalist*)

The Corps of Engineers...is the ultimate arbitrator on the Yellowstone....when we brought people here from Omaha and floated them down the river. 'Oh my God, there are

big boulders in the river.’ Most of the rivers in Omaha have a sand bar. It doesn’t take very long to see where poor decisions get made. They had no idea. ...It is based on old science ideas and it is difficult to get them to change...They went, ‘Oh when we talk about the Yellowstone, we need to use different criteria.’ (*Park County Recreationalist*)

V. *Comprehensive River Management*

A. *Common Ground*

What resonates from both sides...is water quality....[But what is] water quality? Is it simply the chemical analysis?...Or is water quality [connected to] the system?...If you started from water quality, and worked gently outward...describing the mountains that create water quality, then there may be an incremental way to bring people into consensus. They [need to]...fundamentally understand why this water is good and why it is bad. Start from why is water so important to us. It may sound elementary. (*Park County Recreationalist*)

[We need] some common ground where people could realize that the river is the most important....Hopefully it doesn’t take something really bad to make people realize, ‘Hey we need to help this river.’ Usually by the time things are bad, they’re really, really bad...[and] can’t be helped, so hopefully it doesn’t ever get to that point. (*Park County Recreationalist*)

You can’t impose your ideas. You need to involve everybody and all sides. The difficulty is...all sides feel threatened....A good process has to be inclusive and usually that is tedious and difficult to do....The hard part is paring away the rhetoric and getting down to what it is you actually value, and what threatens that. Not your fears, but the reality. It’s really hard to...trust people enough so you can actually talk about the real issue. (*Park County Recreationalist*)

It is just like you see in southeastern Montana, nobody gives a damn in Park County about Yellowstone County. There is no cohesive council or management process. (*Park County Recreationalist*)

All too frequently we are ready to find the differences...I think in my mind there is a bond between the ranchers and the environmentalists but socially they can’t find it. (*Park County Recreationalist*)

We worked with the ranchers and we worked with the state to come up with this [blocking] system and it’s been pretty successful, and the ranchers are happy with it. It’s saving them a lot of money... I think it was monumental in that we were able to get the two sides to actually work together although it was mandated by the feds and the state, but it happened...and it’s made progress. (*Park County Recreationalist*)

[The] River Recreation Advisory Council...tried to have the different user groups represented, some landowners, some recreational paddlers, recreational fisherman,

commercial paddlers, commercial fishermen, representatives, two people from the legislature...[they] had a good facilitator...she was firm...she'd look us all over, 'Now do we agree on this?' If you have a problem you need to tell us now'...one of the things that she kept emphasizing is... to honor these other people's concerns. If the builder wants to build, you have to hear that then. If the landowner wants to protect his private property rights and doesn't want these fishermen walking up on the banks, well then you have to honor that. And where there really is a conflict, then we have to figure out, 'Is there a way we can honor this person's concern and still go there with this guy's thing?' (*Park County Recreationalist*)

It ends up not always being an issue based decision....the Ag community finds their identity with being opposed to the environmental community, whether it restricts the water or property rights...A lot of the time I am disappointed with the environmental community as well for always having a ready opponent. Whatever the issue is they feel like there is always a scapegoat on the other side of the fence....I have been trying to teach my students [that] you may never find common ground. In some cases, that is what comes to the table. Here is an issue that I feel this way and you feel this way and we are going to set it aside because it won't do us any good to yell at each other. (*Park County Recreationalist*)

How do you bridge that gap?...it takes time...generations some times...it's well known in recent years that tourism whips extractive industries in Montana, but when you go up to Helena, or in the Legislative session, the old power bases are still based on mining, lumbering, ranching...even though they are a ghost of what they once were. People as you know, politically are very reluctant to give up power...will it be quickly enough to maybe have some kind of a flood plain zoning or buildingfor the river? I don't know, I'd like to think so. (*Park County Recreationalist*)

I think one group that is woefully uninvolved is the fishing guides....I think the ranchers need to be involved. Every time I was in one of these groups...they made it clear that they weren't going to change a thing. (*Park County Recreationalist*)

B. Control: Local Versus State

I think local control is always going to be a good idea as long as local control isn't a cover for the fact that we want to keep things the way we have always done them. (*Park County Recreationalist*)

I think it needs to go on record, [the violation of dredging the channel] was not solved locally, we had to go to the state, and you could not depend on local law to enforce anything. And that's understandable in a small community too because it pits neighbor against neighbor and you know. (*Park County Recreationalist*)

Without good environmental policies this river isn't going to be worth coming out to see. (*Park County Recreationalist*)

Yellowstone River has all of the protections in place that it needs to have, the laws are in place...so...see to it that the laws in fact that are in place to protect the Yellowstone River are enforced equally and unilaterally across the board, not selectively. (*Park County Recreationalist*)

Initiative 54...says that if anyone has zoned and the government or anybody wants to come in...[and] change...we have to pay those private property owners....It is well documented that...the government doesn't have money to pay them. Consequently, the zoning doesn't do any good...we just have to have some laws from the top down that stick. We can't have loop holes all over the place. (*Park County Recreationalist*)

I think the river deserves a designation...if not wild and scenic then certainly a state designation...[that] protects the river from certain developments. (*Park County Recreationalist*)

State regulation would have a better opportunity to retain or at least discourage local conflict.... It seems like if there was a state orchestrated process then perhaps more generally accepted scientific principles could be applied...Within a...local community, science gets tossed out and it becomes neighbor against neighbor and an emotional type thing. (*Park County Recreationalist*)

C. Managers of the River

If they do not articulate a vision, it is an invalid process. They should spend as much time as possible formulating a vision for the future....If there is not a vision, not a goal to obtain, it is an invalid process. (*Park County Recreationalist*)

Make sure the people...that are making those decisions are educated to make good management choices so you can have preservation and conservation. (*Park County Recreationalist*)

Decision makers need to know that...the river's important, agriculture is important, to some degree you've got to have some kind of development, as long as it's done responsibly....The decision makers...need to make decisions where the river will not be sacrificed; where the river will be preserved and conserved. (*Park County Recreationalist*)

They broke it up in seven different types of river...You have to manage by type.... It has to be tied to the reach tide. The river responds differently. If the river is entrenched, it doesn't move. Other places it is moving all over the place. (*Park County Recreationalist*)

What does keeping it in good shape mean? It means protecting the riparian area and it means protecting the wild nature of this river....you ought to have effective flood plain regulations and enforce them. (*Park County Recreationalist*)

The thing that people really dislike the most is regulation and restriction...but there are other things that you can do besides restricting people from the river, or you know requiring a license or a permit,...it was harder to come up with the things that you can do. But we did come up with a mini-list of voluntary things people could do, but I mean it was instructive to say, 'It's not all or nothing.....Can't we get more creative?' (*Park County Recreationalist*)

I have sat through several meetings in that ranchers like to say that they are the original stewards of the land. In a lot of ways that is correct. In a lot of ways they are not. I have seen BMP mentioned and they [the Council] needs to mention best managements practices are there for a reason. (*Park County Recreationalist*)

This Council got going to protect their interest. My only problem with them is they are not inclusive enough....My hat is off to them. They took a lead and somebody needed to....[They]...need to break that [river] thing up. It is too big. You have cold water, warm water; you have urban, all different sets of issues... they talk a different language and the issues are different because it is a different river...It is a major undertaking. (*Park County Recreationalist*)

I think they [the Council] could have a pretty persuasive effect on planning along the Yellowstone as long as they adopt an approach that is more ecologically sensitive than economically sensitive. (*Park County Recreationalist*)

I don't think they are getting enough input. One of the things is the public wants to be heard. They have no place to be heard. It is astounding if they got heard. They feel better. You go to the local council meetings and they cut you off. They cut the newspaper guy off. I wouldn't cut the press off ever. (*Park County Recreationalist*)

D. Education

Madison County has written a little booklet that is entitled "Code of the New West" and they make suggestions that down lighting only, setbacks from the river, large plots of land, conservation easements, it's very good. I may be Pollyanna, but I really do think that people moving in, if you point these things out to them, most of them will say, 'Oh, I never thought of that. That's a good idea.' (*Park County Recreationalist*)

Short of regulations and restrictions...is public education. I mean people might not realize they are being bone heads....people might not realize that it's really a bad thing to park exactly in the place where you have to back your boat down to get boat access.... Every now and then, somebody will build a fire on the beach...which by itself isn't so bad, but leaving all that charcoal is bad, you shouldn't do that...so unless someone comes along and picks that stuff up...it's going to stay there and diminish the beach. (*Park County Recreationalist*)

VI. Sympathies and Concerns

A. Agriculture, Economies and Land Prices

The power base that's here, and the fact that it appears that Ag really has the hand on the throttle as far as the power base in this valley, and it may always..... Things are changing rapidly, and we hope it will remain basically an agriculture and rancher community. (*Park County Recreationalist*)

Land values are such now that landowners want to make sure the river is healthy. The cows aren't worth as much. (*Park County Recreationalist*)

Agriculture does not necessarily mean good stewardship, and environmental concerns for ranchers and Ag folks are not necessarily the same environmental concerns as the general populace might have. And I think therein is the stumbling block...Personal property rights, period, nothing else, nothing else beyond their property. (*Park County Recreationalist*)

To be fair environmental concerns have put them [Ag] in a heck of a bind, they have the BLM land that is sometimes closed to them and limited in terms of what they can do with it, and then they have the river constraints, keeping cattle fenced out, and the irrigation stuff that might be more limited. (*Park County Recreationalist*)

Montana [has] always been an agricultural state. In the Paradise Valley...there's still a lot of agriculture there, but a lot of that Ag land is [where] houses [are] built now...with part-time residents that are here for a few months out of the summer. (*Park County Recreationalist*)

I have no problem with irrigation; I just want them to do it right. (*Park County Recreationalist*)

Theoretically ranchers should be the greatest environmentalists in the world because they are taking care of that land, [but] economics say they can't make a living. Consequently, their thought is subdivide and get out. (*Park County Recreationalist*)

B. Local Values

[It's the] way of life. People don't live here because of what they are paid. I mean it is the amenities...of the outdoors [that] are very important...Rivers are a very important part of that. (*Park County Recreationalist*)

People get along at least on the face of it...it's just part of the culture here. ...87 years old, as far right-winged as you can get and me and him are great buddies, but we're very careful about what we talk about. (*Park County Recreationalist*)

It depends on which way you are looking from....People who look from the river out... see a different world and have an appreciation for some of the natural intrinsic values of the river and often not revel in its violent activity but would understand why that violent activity occurs...as opposed to people looking from outside at the river....From the landowner looking at the river they often see it as an enemy...an infringement on their property rights....People who appreciate the intrinsic values of the river will be much more receptive to management of its own benefits as opposed to someone who sees the river as a varmint that you have to constantly watch. (*Park County Recreationalist*)

I took his [blocking system] plan to the irrigators and said look here's a plan that you need to think outside the box you've been doing this thing the same way for 80 years now, and it's pretty well demonstrated that it's not working real good. Try to think outside the box....we got state funding to fund the project, we got state grants to fund it. (*Park County Recreationalist*)

Whenever you move into a small rural area, there's so much cohesion...and [it's] isolated. So you can't go in with the idea that you're going to change a lot of things, and that wasn't ever our intent anyway, I guess living next to the Yellowstone, you get such a loyalty to it. (*Park County Recreationalist*)

It was pretty intense [when we were dealing with dredging of the channel] because we came off as hating ranchers and not wanting them to get water, and that wasn't ever the case, it was just equality before the law, you have to have that. As it turns out though, it resolved itself in a fairly positive manner. (*Park County Recreationalist*)

I thought everyone recognized that [planning] was the one thing that was missing. They were granting permits on a landowner by landowner basis and we needed to look at a bigger picture. That was the failure in the permitting process...I remember having these discussions...that if I were a landowner on the Yellowstone I would be really concerned about what the guy upstream was able to do. That was a lot of the problem....because a permit on a neighbors place created a problem for the other neighbor. Any time I tried to get that [discussion] going...a landowner was more willing to deal with damage on his own property rather than say that the guy had to be responsible for what he had done because that meant he would be next. That thinking scares me. (*Park County Recreationalist*)

I think there would be an awful lot of distrust for any kind of program to compensate them [Ag] when they would rather do it all themselves. It is not so much how profitable the ranch operation is going to be but that they want to do it their way and not the way that someone else wants them. Like the wolf issue...the rest of the people want to see the wolves. So they will just compensate them for the calf that they lose. There are other intangible issues. Some governmental boy is going to tell them how much they are going to be paid for their cows ? It becomes more of a control issue. (*Park County Recreationalist*)

We've got a new group of people coming to town. Livingston is changing very, very quickly....in Livingston they'll tell you real quick, 'You know a nail that sticks up is going to get pounded down fast.' But there are a lot of new nails sticking up in town, and they can't pound them all down. (*Park County Recreationalist*)

But the wedge issues are continuing to be played. The farmer versus the angler and several others...then there's the old western thing of, 'I'm going to do with my God damn land exactly what I want to do and there ain't no God damn body going to tell me different'. Well that's what built the west, but it's starting to hurt it. (*Park County Recreationalist*)

C. Concern: Water Quality

Preservation is important...If our water is unhealthy, we're unhealthy. That's been kind of an environmental little cliché...And [the health of the river] could be documented through fish population studies and all the macro-invertebrate studies and all the water quality studies that they have. (*Park County Recreationalist*)

We have a special thing on our well, it's an ultraviolet light that keeps the water in good shape in flood time....the way the water table is here, we have quite a shallow well, it's legal, but it's quite shallow. And we were always concerned about that because we really do need to make sure our water is safe...[because] it fluctuates with the level of the river. (*Park County Recreationalist*)

Raw sewage was being dumped [at] Gardiner, Montana....It's when the electrical power goes off, they don't have a shut off valve, so the raw sewage...goes right into the river. (*Park County Recreationalist*)

I mean that's often the assumption...you know a little bit of pollution here won't matter because the river...disperses it so much that it makes it insignificant. If you lived out in Glendive... at the receiving end of all that, maybe it does become significant. (*Park County Recreationalist*)

I've seen...very little if any movement to try to mitigate....the amount of pesticides that go into the river from ranching. And there are more and more folks moving in down the valley and...they've got lawns...and there's a lot of nitrates now going into the river. (*Park County Recreationalist*)

I remember the flood of 96 and 97 very clearly...after those two flood years, we had a salmon fly hatch in town, it's the triple cheeseburger of a bug to a trout...The warden...told me he couldn't remember one being for 20 years...he said...the volume of the water...was huge...[and] washed out all the heavy metals and the phosphates...and the pesticides, and it gave the bugs a chance... that was the only hatch because the nitrates and stuff were still being pumped in...it should have served as a heads up....When do you start saying this is a finite resource...it can't look out for itself. It can't handle that load of pesticides. (*Park County Recreationalist*)

D. Concern: Water Quantity and Water Rights

We basically don't have a water quantity problem, we're the headwater....But I'll tell you there is a quantity problem as this river is used more and more for industry...[and] city water uses, and agriculture, and then compromised [by] coalbed methane....Quantity is an issue down in the eastern part of the state. (*Park County Recreationalist*)

We've had three or four subdivisions that have gone in, from Emigrant towards Livingston...where they subdivided [the land into] twenty, ten- to five-acre plots. I don't know where all that groundwater is going to come from. We have so many homes up above us...and we know that a lot of the wells are not very productive up above...We've had sufficient water here, [but] it doesn't mean it's going to be that way ten years, twenty years from now. (*Park County Recreationalist*)

You've got the ranchers with irrigation, and then you've got the recreational users, and water in the west is tricky. (*Park County Recreationalist*)

On the other end of this, there's a diversion where the canal comes off. [It] goes all the way through Paradise Valley and irrigates all of the alfalfa growing in the whole valley.... By the state [accounts] it is a natural channel...but a lot of the local people and the irrigators claim, 'No, we dug this channel and this is our channel.' [It has been] a big bone of contention....So, this is a very unique situation we have living along this particular piece of the river. (*Park County Recreationalist*)

E. Concern: Fish Populations

Whirling disease...effects cutthroat trout and rainbow trout. It's a parasite that basically burrows into the...skin and pries...into their vertebrae....It eats away, causing their vertebrae to bend....and so when they swim it causes them to spin or whirl which is whirling disease... It eventually kills the fish. (*Park County Recreationalist*)

Hopefully the Yellowstone cutthroat can...get their populations up...They...just keep going down more and more every year due to habitat loss...to the whirling disease...[and] to the inner breeding of rainbow and cutthroat making a hybrid called a cutbow. Some people call them that for lack of a better name. (*Park County Recreationalist*)

When push comes to shove between the Yellowstone and other uses...the trout are way down in the hierarchy. I mean...there's...never talk about restricting irrigation in an extremely low water year to keep a minimum stream flow. (*Park County Recreationalist*)

The cutthroat population is headed in a not very positive direction. They have talked about listing the cutthroat [as endangered]. I am not sure if that is necessary, yet, but I would think it will be at some point. I would like to stem the tide before they have to be listed. (*Park County Recreationalist*)

F. Concern: Invasive Species

You know invasive species, like the noxious weeds...[well] the New Zealand mud snails are another invasive that's a problem...and there's an algae called Didymo. (*Park County Recreationalist*)

Development brings weeds. (*Park County Recreationalist*)

I'm very upset with our government...To control knapweed, we need to spray every single year....We pay mega-bucks...to a professional...and yet our land borders state land, and it's nothing but a dump full of knapweed....Then we have a neighbor on the other side of us, from New York, who never sprays....[Knapweed] ruins all vegetation of grasslands. (*Park County Recreationalist*)

Noxious weeds along the banks are...an important issue....I don't think anyone in the county would argue on that one. (*Park County Recreationalist*)

The darn beaver...I hate to say this, but they are so destructive. They'll cut down these trees that are hundreds of years old and then there's nothing left. (*Park County Recreationalist*)

A tree deserves to live longer than any beaver in Montana....A tree is light, it is oxygen, it is air, and it gives much more than any dirty rotten beaver does. We have to preserve and save...the tree, which saves our lives. (*Park County Recreationalist*)

G. Concern: Ice Jams and Floods

[The] flood issue is always a problem....We have an affidavit that shows, back to 1865, that this property has never been under water. But in 1996 and 1997 it came [and we had] one or two inches of breaching back here. We sand-bagged portions of it. Of course, when a river is that big, you can't stop much....We didn't flood but a lot of people did. (*Park County Recreationalist*)

The '96 and '97 [floods] were so refreshing, in many respects, because the river was just huge and nobody had ever seen it like that. And it was rampaging all over the place and doing wholesale channel changes down there in Livingston. (*Park County Recreationalist*)

Springdale to Gardiner: Residential Interest Group Overview

Nineteen interviews were conducted with property owners holding 20 acres or less of land bordering the Yellowstone River, or within 500 feet of the bank. Names were obtained through a GIS search of public land ownership records. These names were randomized within counties. Other people living very near the river and whose primary incomes are not generated by agriculture were also recruited.

| Participants in Yellowstone River Cultural Inventory—2006 | | | | | | |
|---|--|---|--|---|--|---------------------------|
| | GEO SEG I: Missouri River to Powder River | GEO SEG II: Powder River to Big Horn River | GEO SEG III: Big Horn River to Laurel | GEO SEG IV: Laurel to Springdale | GEO SEG V: Springdale to Gardiner | TOTAL IN GROUP |
| AGRICULTURAL | 22 | 22 | 16 | 12 | 14 | 86 |
| CIVIC | 14 | 14 | 18 | 14 | 8 | 68 |
| RECREATIONAL | 15 | 16 | 16 | 13 | 16 | 76 |
| RESIDENTIAL | 15 | 11 | 16 | 15 | 19 | 76 |
| GEOGRAPHIC SEGMENT TOTAL | 66 | 63 | 66 | 54 | 57 | |
| NATIVE AMERICAN | | | | | | 7 |
| PROJECT TOTAL | | | | | | 313 |

Springdale to Gardiner: Residential Interest Group Analysis

I. Living Near the River

A. They Call it Paradise Valley and It Is

I feel real fortunate to live here. I mean, they call it Paradise Valley and it is. (*Park County Residentialist*)

It's very peaceful at times, most times, not all the time...[and we like] to see the changes of the river. But probably most [importantly we like] it because it's close to the water....We're pretty active water people. We fish a little, but we mostly just enjoy being around the water. (*Park County Residentialist*)

[I enjoy] the serenity of being here along the river and all the mountain views and snow....I just love all this natural beauty. And we all live in this plastic cement world today so it's just wonderful to be able to get away from that. (*Park County Residentialist*)

The river is actually magical. I made the mistake of actually taking relatives on the river and now they want to come back every year. (*Park County Residentialist*)

I like living by the river....It is extremely pleasant in the summertime. We have two creeks. We are almost on a peninsula. The sound of the water is awesome. I like to go and sit by the river and look at the mountains. (*Park County Residentialist*)

[Our home] is a haven. We consider it a haven....It is almost like you are living alone, 50 miles from town. (*Park County Residentialist*)

The river...has a personality. It's different everyday. Sometimes it's your friend, sometimes it ain't your friend. (*Park County Residentialist*)

It is a free-flowing stream that is clear except during the high water until you get to the Billings area. It is very beautiful from Billings on to its headwaters....It is part of the community. (*Park County Residentialist*)

[The river] certainly is a focal point....It's a great resource for the people who live along the river, for agricultural purposes and ground water purposes. (*Park County Residentialist*)

It can have a water cooler existence....'Hey, what's the river doing today? River's running high. River's running low.'...[It's] a conversation piece. (*Park County Residentialist*)

It's just a real benefit to be able to go down and chill out and relax, very calming and soothing....[It is] spiritually seductive. (*Park County Residentialist*)

The mountains have a...type of impact on the individual, even if that individual doesn't acknowledge it....The river has an impact as well. Without the river, the mountains have too much power and actually impact your ego. The river provides a balance,...a healing,...a strengthening of your ego. (*Park County Residentialist*)

You could be an atheist and still appreciate what the mountain and the river have to offer, because it doesn't attach itself to any type of philosophy or train of thought, but it still reminds people that there is something bigger than them....People come and go. The mountain is still going to be here; the river is still going to be here....That's the constant of its existence; that's what attracts people to something like the river. (*Park County Residentialist*)

The river [provides] spiritual unity....Water is a calming influence on people....We consider this as sacred ground. The river does play a role in it in distributing that sacred essence down to the...rural communities....We actually use the river as a conduit for prayers and a conduit for spirituality. (*Park County Residentialist*)

It was a way to get away from the traffic....[We're] close enough to town where we could work in town and not have to drive so far and still enjoy some of the nature. (*Park County Residentialist*)

What we have is about perfect. We would like some more access like a walking path along the river. Maybe some day they could maybe have a trail all the way into town. (*Park County Residentialist*)

It's part of your body, not your physical body, but it's part of your awareness. So if the rivers' being traumatized, by whatever, it hurts....During high water and things are just washing out and the river is recharged, vibrant and alive, you feel nourished. (*Park County Residentialist*)

B. Fish, Wildlife and Habitat are Important

We have a lot of mule deer who always give birth to their young on the island and that's right at the time...the spring run off comes so I think they feel very safe by giving birth on the islands....There were 12 here this morning and it's neat to see last year's young and then this year's young. (*Park County Residentialist*)

We're in the elk migration route. They've been migrating from Yellowstone down here for 10,000 years....They migrate off that flat up there on the top and come down here to the lower lands and...and they feed in that big grass field across the river....[and] they...come across the river to the islands....I just enjoy watching them. (*Park County Residentialist*)

I was down there one day and I heard a mountain lion roar and he came running through there. He was roaring and raising hell. That kind of surprised me. I don't know what he was fussing about but he ran right through there....I heard him raising hell and that is what caught my attention....I didn't get close to him, and he didn't get close to me. He moved on out. Something had disturbed him. I don't know what it was. (*Park County Residentialist*)

We...even [had] a black bear last week, right in the yard....My son was sitting across from me and he said, 'There is a black bear,' and I thought he was being funny. I said, 'Yeah, sure.' He said, 'There is a black bear!' And sure enough there it was. The dog saw it and when it barked it took off. We haven't seen it since. We keep anticipating it will come back. (*Park County Residentialist*)

It's hard to believe but,...about two months ago,...way up on the top of the hill, there...[was] a mountain goat [and] I went out on the porch one day and a pronghorn was walking down the road and looked at us, and a moose. (*Park County Residentialist*)

It has wildlife...ducks,...osprey,...deer,...antelope,...raccoons, elk and skunks,...swans...just a lot of different birds, especially after...bugs hatch there's a lot of activity down by the river. (*Park County Residentialist*)

In '96 and '97 they had a tremendous flood....It brought down a lot of beavers. And they cut down probably somewhere in the neighborhood of at least 200 trees that were on these islands which was really kind of sad. (*Park County Residentialist*)

Occasionally [we see] a bear....There have been sightings of cats. (*Park County Residentialist*)

One of the positive things that have happened since I was small is the abundance of game. I can remember when I saw my first deer in the river bottom and now they are everywhere. Whitetails were almost unheard of and the only time we saw a goose was during migration season. No raccoons. (*Park County Residentialist*)

It is not like when my father was small. There...[were] a lot of native cutthroat. He told me he would ride along the river and fish would get trapped along there. There was that many there. I think the introduction of the brown trout and the rainbows probably had more to do with ruining that than the actual fishing. (*Park County Residentialist*)

They've had trouble...with whirling disease...here on the Yellowstone River. (*Park County Residentialist*)

C. Recreational Uses, Needs and Pressures

We're not all rich people that can buy ranches and have our own private...hunting and fishing....I think we have the highest per capita participants in hunting and fishing that live in Montana compared to other states and part of the reason is...the

opportunities...we have. It's still good for the average person....They can have as good of access to hunting and fishing as the rich people do and that's real important to keep it that way. (*Park County Residentialist*)

Our grandson walks down and goes fishing....He just loves it here. He is going to be eight. (*Park County Residentialist*)

The outfitters and fishermen are probably the main recreational users...and when I say fishermen, it doesn't have to be clients. [They can be] locals, too. (*Park County Residentialist*)

The increase of traffic along the river....I think tourists are finding out this is a great spot and I think it is increasing. Every year there seems to be a little bit more of an increase in how many people float the river...and fish. (*Park County Residentialist*)

I really do believe that at these fishing access should have one of these portable toilets...and...keep them clean....I think that's a real need for the people...coming down the river and also for the people who live on the river. (*Park County Residentialist*)

[More people on the river causes] over fishing,...more risk involved for people,...maybe rafting in places where it may not be still enough....I see people not wearing life jackets, [and I see] people drinking....It seems like once or twice a year somebody goes in the river and doesn't come out of the river, which I suspect would be a problem for someone. (*Park County Residentialist*)

When I lived in Billings, we came up here every weekend and floated the river. Now that I live here, I go three or four times a year. You get to taking it for granted. (*Park County Residentialist*)

We have seen...the increase of fishermen on the river and I'm not so sure for many of us folks that live so directly here on the river...really appreciate it to the degree that it is. Some...use language that's not so desirable. They're very loud. They don't seem to have any regard for the wildlife. They get their dogs in the boat...then [the] dog is out there chasing these deer who have just given birth to their young. (*Park County Residentialist*)

A neighbor...has small children and she said, 'It's to a point now that so many of these fishermen are so rude and it's getting so bad I don't want my children exposed to that.' She has moved....Human consideration—...it's missing. (*Park County Residentialist*)

There is just boat after boat after boat coming out to the valley so there is a lot of traffic on the river. (*Park County Residentialist*)

We enjoy going out by the river,...walking around, sitting out there fishing and watching the otters....We spent a lot of time out there. We never thought about it as money thing....It's more entertainment. (*Park County Residentialist*)

I don't fish. I don't boat....Early on, I had a healthy respect for the river as far as high water and getting into trouble....I was raised on a ranch south of Livingston along the river. I never swam in the river....Once you see the river in high water and see a cottonwood coming downstream with the leaves on it and all of the sudden it goes under water for a few hundred yards, it is kind of scary. These logs along the stream, you can't run fast enough to keep up with them. (*Park County Residentialist*)

I live next to the fishing access....I went out there with a garbage bag...and filled it in nothing flat with garbage....They take our signs down. They've got trails through our property....People are really rude....They don't respect other people's property. (*Park County Residentialist*)

I think that you've got outfitters that want to see things for their clients, and their decisions are largely based on money....Their income depends on what kinds of experiences their clients have on the river. (*Park County Residentialist*)

Growing up on the river we fished it,...just watching the wildlife and floating the river. I used to guide raft trips on the rivers too, and we'd get a lot of fishermen. I have three younger brothers and we all have been avid outdoorsmen and it was a pretty piece of property. (*Park County Residentialist*)

D. The River is Public, Trespassing is a Problem for Some

I am trying to remember if people that have been trashing my property, but I don't believe they have. It is clean down there around the river....They can get down there through a gate on my property. They have kept it clean and haven't messed it up. I don't care if they go down there and have their picnics. It is fine with me. I like for them to enjoy the river. (*Park County Residentialist*)

I'd like to see public access maintained. I'm a real believer in the stream access law....Let's use the resources. I'd like to see sensible use of it. I don't want to see wildlife adversely affected by or during a drought year. I want to see enough water maintained to keep the fisheries stable and in good condition, if that's possible. (*Park County Residentialist*)

We have a lot of rafters that float by. A lot of fishermen. I enjoy that the river is being used. (*Park County Residentialist*)

Last year there was a guy that had a great big canoe and he spent the night there on the sand bar....We don't know who owns that. Lots of times they will spend the whole day with the family. (*Park County Residentialist*)

One year we had a flood and there were tremendous waves down here. The kayakers found out about it and they [came] in—some of them were changing clothes right on people's property and they were trashing the properties....We did have a problem when

we first moved here. People would drive down here and I had to post the property. (*Park County Residentialist*)

Trespassing can be a problem along the river. We have people go across our property to get to the river. (*Park County Residentialist*)

II. Floods of 1996 and 1997 Precipitate Public Debates

A. The Floods Changed Everything

The flood of '96 changed my property....The island broke in half and...when it broke the force of that came over and hit that island and doubled back. My neighbor had very poor rip-rap and [the water] found the weak link and just kept coming to my house....I lost 100 feet [of property]...and part of the house. (*Park County Residentialist*)

[After the flood was over] I said, 'Couldn't we move some of the rocks so the river would go back where it was?' [The Commissioner] said, 'The fishermen wouldn't like that.' I said, 'What is more important?' and he said, 'Around here, the fish.' Can you believe that? (*Park County Residentialist*)

The reporter for the Park County paper said, 'You were the hardest hit in the flood so I am doing a story.'...[They took pictures and the story explained that we not living in the house]...so then [thieves] took our stuff....They didn't get an awful lot...but they got all the stuff we had put in boxes—all kinds of pictures. (*Park County Residentialist*)

I got a letter from the County telling me that I couldn't rebuild because I lost more than half my house and if I decide to move it nobody could use [the property for a home]. They were going to take my place away....My brother-in-law said, 'Let's go see that [county] woman—we haven't lost half of your house.' So, she [came] and walked around, 'Oh, you haven't lost half of your house. You can rebuild.' (*Park County Residentialist*)

After the flood, they built concrete all across the front of the house up to this floor. Then they put the huge rocks in....It is [a] concrete wall...[and] there is the barb. I am pretty safe. It was nothing like this before....They are saying you shouldn't rip-rap, but this is my home. The engineers will allow me to repair this....If anything happens, they will let me fix it. I am grandfathered-in. They will let me do that. (*Park County Residentialist*)

See, no one is supposed to build here [now] because it is a floodway. The house next door that was the last one built on the island. (*Park County Residentialist*)

B. Need for Balance, Information and Assistance

1996 and 1997 were historical record flood years and...conversations have really been stark because of those two major floods....I think people got scared about protecting their properties and some properties were lost. And so with the protection of property and

living on the river, there's controversy. And I think, before the [floods, the] controversy probably wasn't as strong....I think we can be good stewards to the water and the river ways but also [we can] protect our homes....Somehow we have to come up with a balance instead of just saying, 'Oh, you can't do this, and you can't do that.' Somehow we have to work together to come up with what is the best thing for the river and [the people]. (*Park County Residentialist*)

In 1996 we lost quite a little bit [of land]....We lost quite a bit this year....We recently...got it re-surveyed and found out that there isn't, and never has been since we've owned it, as much land as we've been paying taxes on. We've been trying to obtain two titles on this property....Once we get that done we will take it to the county treasurer and see what we can do about that. (*Park County Residentialist*)

Initially I didn't really know what to do and I was looking for advice [on the permit process]. None of those people give you advice, not the Conservation District, not the flood plain people, and not the Corps of Engineers....I just talked to people. (*Park County Residentialist*)

None of [the users] should be allowed to overtax the facility. Every once in a while you will see maybe six or eight guides with fishermen out. I am sure that they get on each others' nerves. The common sense thing you mentioned,...you know people are basically greedy by nature. (*Park County Residentialist*)

When we first moved here and we knew we had problems with our banks just because of, well, poor management. So we called up several different professionals....We wanted a conversation about what would be the best thing for us and the river. And we didn't get a lot of good information. In fact, very little. And I think that's one of the things that is missing....There's not a lot of people that can afford a major study on how to protect their lands....Somehow we have to have that information available and be willing to work with people on the river so they don't do something that's going to damage someone else, or damage the river, or straighten the river....This is a meandering river. It's great. It should stay that way. (*Park County Residentialist*)

The public, and myself included, we need to have some available information....We [weren't] really good stewards when we moved here. We've done some rock work along our bank, and there wasn't anyone there [to advise us]...unless we could have paid for professionals....But at the time we couldn't afford it....If there's some kind of grants that may be available so you can hire a professional—if those professionals really have the answer—that's a question...I have. (*Park County Residentialist*)

C. Ideas About Erosion and Stabilizing the Banks

We did have a flood those two years '96 and '97....It did tear away a lot of my bank....The topsoil that is gone....It's done so much damage to our property out there in those two years of floods we haven't been able to get picked back up again....We're not millionaires; we couldn't get it all done. (*Park County Residentialist*)

I think you have to have rocks. If you do it right with vegetation, I think you could do a pretty fair job. I could show you on our place...one place where it has worked very well with vegetative growth, but [it doesn't work] in every place....I think vegetation with rock would be a great way to go, so long as it's done in a way that you're not going to cause damage downstream from you. (*Park County Residentialist*)

The Conservation District encourages people to put the barbs out....The barbs seem to be working pretty good, and then plant vegetation there....I think [those methods] cause less impact down stream. (*Park County Residentialist*)

Don't be too hard on the people that live on the river. I don't have the money to make big changes....I had a bunch of cottonwoods growing and the beavers came and ate every one of them. There went my stabilizing....[The beavers] are really destructive. I am trying to keep this place,...[even though] the moose come and they eat everything they see and...I am not going anywhere. I am going to stay here. (*Park County Residentialist*)

A man down the road here...made a berm out in the river....It caused that river to go right into our property. (*Park County Residentialist*)

We've never experienced any [erosion] here because we have a lot of willows on the river bank right here. (*Park County Residentialist*)

I haven't really seen any noticeable [erosion] change at all. And we had a lot of water through here in the spring. (*Park County Residentialist*)

When they put in that rest stop, they put a rock barrier along there....The people in the cabin felt...it diverted the water, pushed it over to their side, and they've almost lost the cabin. (*Park County Residentialist*)

Vegetation is one of the key factors [in helping with erosion,] if it's done...right. (*Park County Residentialist*)

I have seen the river deepening the channels and cut the riverbank....[There are] on the places on the river bank [that were] four or feet high when I was young...[and now they are] 10 or 12 feet high. (*Park County Residentialist*)

Our bank changed....The rocks used to go way out in the river. The main force used to be on the other side. We lost at least two feet in one area of bank. That changed the whole flow of the river. Now it comes around the bend and comes at us and then swings out the other way....It changed dramatically with the flood. You don't notice a flow change as much. (*Park County Residentialist*)

[Rip-Rap] can divert water. It can shift the problems up or down....The reason that I probably might not do the rip-rap is I'd lose ten years of vegetation that's out there since the last flood and the vegetation is as good or better than hard rip-rap...[and] once I talked to some people who explained that to me, I don't really want to tear it up to put

some rock in...but [the information] didn't come from any of the [government agencies.]
(*Park County Residentialist*)

I was interested in one technique [to prevent erosion.] I saw on a ranch that used root balls along the river to start collecting rocks to start building the bank up again....It is a natural form of rip-rap. I saw some of that and was interested in that although when you call somebody that does that natural stuff it costs a lot of money. I don't know if I have that much to put on the bank of the river. (*Park County Residentialist*)

D. Concerns About Spring Creeks

The Armstrong and DePuy and Nelson spring creeks....are a valuable asset...[that] brings a lot of money into the economy and they are a unique fishing experience....[At the] campground fishing access, the river eats directly into the gravel. This fills up the river bottom with gravel and it spreads out. It elevates the flood plain. It damages the spring creeks on the east side of the river in that area....These last two high water years really devastated the spring creeks. Nothing has been done as far as I know. No one wants to acknowledge that it is a problem, but it is....They don't know how to deal with it....When you get these large floods and especially if the river is pushed out of its channel, it tends to go down those channels and the spring creeks are located along the western edge of the low lands. (*Park County Residentialist*)

III. Growth in Livingston and Paradise Valley

A. Growth Changes the Physical Landscape

The development is just unreal....At night...I used to drive around and see a dozen lights in the old days, and now there are just hundreds of them, thousands of them, literally. So a lot of the ranches have been chopped up. But it's dollars....They can make more selling it for a house site than they could making hay. (*Park County Residentialist*)

It isn't the houses so much as the people that are coming with the houses. They change what we need. I don't need Wal-Mart; I don't need to be going 100 miles an hour all the time. When my kids were little we would walk out here, they would ride bikes. There used to be a single lane wooden bridge out here. They had to upgrade that and now there is a 35-mile an hour speed limit and nobody pays attention to that. There is all the strip mall development. Pretty soon we will have all that development along there I guess. Maybe that is good for some people. I don't know. (*Park County Residentialist*)

Developers...go and dangle two million dollars in front of somebody's little ranch....[The ranchers] are going to take it. And that's happened a lot. So you're actually losing some of the rural people....[This began in the] late '70s. (*Park County Residentialist*)

Everyone is dividing [the land] up and selling it off because they can't seem to make as much money keeping it as they do with the people [coming in] that are willing to pay.
(*Park County Residentialist*)

I wish that people that moved here, would move here...just for the beauty of Montana and...to get away from the city....[But] it seems everybody that moves here has to put in an...outside light and I'm thinking, 'Why? Are you scared the bears are going to get you at night? Why are you ruining this beautiful night vision of the stars?'...They want to bring the city with them. (*Park County Residentialist*)

Paradise Valley...may change quite a bit. Yankee Jim [Canyon]...won't change a whole lot because of the Forest Service and the Park. But in Paradise Valley, as land prices go up and people start seeing...money, people will start selling their ranches. (*Park County Residentialist*)

I think [change in Paradise Valley] would still be minimal because you still have some expansion of Bozeman that will happen, maybe some from Livingston to Bozeman, but,...once you get into Paradise Valley, I don't see [it] over the next ten years. (*Park County Residentialist*)

What the real estate agents saying is that...[it will] be the next boom....Bozeman's in a boom right now. Once that...reaches a homeostasis, then Livingston, which is already experiencing it, then possibly the Emigrant area will experience the boom. (*Park County Residentialist*)

B. Results of Development and Change

It's kind of a good/bad thing because...the tax dollars still roll into those places, but yet the people are only here for a small part of a year. So the population, in a sense, is down, but it's still the tax dollars....it's a good/bad thing. (*Park County Residentialist*)

There's an influx of people in the summer, of course, because most of the people aren't here in the winter....Everybody has their own viewpoints on that. I think it doesn't tax our system as much as the people living here [all of the time]....If they're paying their property taxes, I think we're getting a benefit that isn't causing us a lot of problems. (*Park County Residentialist*)

[My kids] will be lucky to afford to live here, I'm afraid. We're lucky we bought our property when we did because we couldn't afford it today....We just got a new law passed by Congress on conservation easements that's a lot more user-friendly. Before, the only people that could use those conservation easements were multi-millionaires, basically. And this new one, in fact I was reading about it this morning, you can defer this for, like, 16 years, where before you had to take your tax deductions in six years. So there are some positives there, although you mention conservation easements to some people and they think they are wicked. I think it will help me for estate planning to be able to pass our place on to the kids easier. (*Park County Residentialist*)

If I could stop the influx of people, I would....Properties [are] gone. I look at my grandkids and I don't see how...they're going to be able to buy a home. I mean, wages just haven't kept up with the prices of homes....We're pushing our own kids out of the

state....How in the world are they going [to] live here unless they get a piece of land and build their own little house? (*Park County Residentialist*)

Livingston has turned into nothing but a tourist town, nothing but art....There's nothing. We have to go to Bozeman to get almost anything. (*Park County Residentialist*)

Most of the ranchers are looking down the road and thinking, if they get in trouble, they can subdivide. From what I am hearing, the price of the lots on subdivisions is going down. They aren't selling like they were. (*Park County Residentialist*)

C. Responsible Development

Some [developers] are doing a good job, and some of them are just looking for the quick buck, I'll be quite honest....A guy from Wisconsin did a subdivision down here by Mill Creek, and he did a really nice job....[But there are] not a lot of local people doing development because you're talking high dollars now to buy these ranches and develop them. (*Park County Residentialist*)

I think that most of the property owners recognize the importance of the river so any type of development that may go on will...[be] responsible....They [will try to] blend...with the natural scene of the river. (*Park County Residentialist*)

We actually did a little development on our ranch....We did the 20-acre tract thing because it was easy to do. But we also went through the planning office and county sanitarian and tried to do everything that they suggested. (*Park County Residentialist*)

I think what their plans are...to develop...a...cluster development so...it leaves a lot of wild open spaces....People buying there will be able to enjoy the beauty, and the people traveling through the valley will still be able to enjoy it....That would be a great thing. (*Park County Residentialist*)

Paradise Valley doesn't have much good farming ground in it. It is a large gravel bar. It isn't like the Gallatin Valley, which is really being raped....If they keep the subdivisions over on the gravelly parts, it isn't going to hurt somebody. That is probably good use of the ground. Billings used up all the good land for miles....They could go [away from]...the irrigated ground and build forever, but they choose to build on the good ground....People can come here and should be able to if they choose to live here in a responsible manner. I would have the same right if I wanted to move somewhere else. (*Park County Residentialist*)

[The canal] was first built in 1890 by the Armstrong family. It is an important part of the valley for agriculture. It furnishes water to both sides of the valley....[We need to educate the public about] the economic benefits of it to the community [and that] irrigation...takes a lot of floodwaters out of the streams, especially the small streams and lets it back into the groundwater system....They are entirely dependent on the recharge. It

isn't important as far as the Yellowstone but it is important along the rivers. (*Park County Residentialist*)

We think that [when] people have bare land there has to be some thought as to what goes on there. Some planning. (*Park County Residentialist*)

I do want to see a good growth policy plan....I certainly don't blame the ranchers for selling their property and making money because that's all they had and you know they can make enough to retire on so you can't blame them. But on the other hand people have got to kind of plan for the future because I just think that these are kind of the good old days. We aren't going to have less and less people. We are going to have more and more people and change is going to happen whether we like it or not. (*Park County Residentialist*)

I think it's important to have the planning....You have to have those discussions....I live in Montana not to make money, but because I enjoy the outdoors....We have to protect the environment....I do think that you have to grandfather in [the] people...here before those decisions, especially local people. We don't make a lot of money...and everything that we own is tied up in this property....We could sell this and make a profit but I couldn't buy property anywhere else. It's just gotten so high. (*Park County Residentialist*)

There needs to be a direct growth policy from a diverse group of people. You can't have one special interest trying to dictate. It's got to be give and take. You're not going to stop them from coming in here. You can stop them putting raw sewage in the river. (*Park County Residentialist*)

D. Irresponsible Development and Changes

The subdivision regulations [were written] by the professional planners for Park County and they actually did a pretty good job....Now we have citizens, [and] I think a lot of them are developers or people working with developers, that are trying to oppose the growth policy that was established....[The policy] is very broad, but they just want to see subdivision regulations thrown out....It's the old, 'Don't tell me what I can do. I can do anything and if you don't like what I'm doing then you have to buy it.' That's the attitude....There are a lot of local developers that are really outspoken....They may be leaving soon after they develop, I don't know. But they are local....I know one [who] will be out of here once they develop and sell their property. (*Park County Residentialist*)

You'd like to see it stay as wild as possible, but...common sense tells you that that's...not going to happen....Development here is just absolutely the major thing....When the County tries to do anything,...[the developers] say, 'We're going to sue you for this' and the County thinks, 'Well geez.' They've got all these lawsuits. They can't afford to fight all that. These people that are developing, they're making millions of bucks so they have the money to threaten. (*Park County Residentialist*)

Some of the developers are wanting services yesterday and not wanting to pay for them until tomorrow. Of course they said, ‘Oh, bring in three more planners. We just want this system to work fast. We’ll pay more.’ Of course, soon as the County raised the rates, they squawked. I think there’s three lawsuits against the county right now because of some of those problems. (*Park County Residentialist*)

You have developers that obviously want to be able to build right up to the riverbank and build big trophy homes to sell....I’ve been a contractor for most of my life and in the construction business around here. So I can see certain points, but I sure don’t want to give up what’s good about Montana just for the sake of [my] job as a contractor. (*Park County Residentialist*)

We’ve been fighting this road project now for the last five years....This is a country road...[and] people built here...because they wanted the serenity....[The proposal to make it a State highway will create] a hazard because people are going to fly....[and] people are not going to pay any attention to [the debris-falling signs]. People are going to die on this road because you’re going to create this speedway....The County’s saying they can’t afford to maintain it...[and] the State will not listen to the people that live here and pay taxes here. They’re more concerned about the people coming in and visiting for two weeks then they are about the people who live here. (*Park County Residentialist*)

It depends on how the lands along the river sell as to what happens. It is zoned [as] agriculture lands and they are putting subdivisions in on ground that has less value. The biggest danger I see is...the string of houses along the roads with no open space. I think that is the biggest challenge is to preserve open space so it isn’t one subdivision after another. (*Park County Residentialist*)

One man [is developing] a gated community....He’s doing some appropriate things—he’s doing a lot of studies and spending a huge amount of money. It’s going to be second homes—and very, very expensive. He’s calling it a Private National Park....He wants to buy two sections of State land, and I oppose that. I’ve been writing letters...[because] public land is basically being sold for privatization and development. It’s happening, but whether it should is a whole other question. (*Park County Residentialist*)

IV. Observations Regarding the Governor’s Task Force

A. They Could Have Done Better

I did go to some of the meetings. I just thought they weren’t really getting anywhere in the meetings....They weren’t allowing the professionals to be a participant and a voting party, so basically they had task force members, but a lot of the scientists and people that have the expertise, I felt, were not part of the equation. I mean, they came and they presented things, but [the professionals] weren’t a voting mass....The scientists and the professionals...need to be participants in the Task Force, not just presenters. Because they are the people that know, and they should be the people that are helping this balance that needs to be met here. (*Park County Residentialist*)

There were tons of recommendations [from the Governor's Task Force] but I don't see where any of their recommendations were followed at all....The people...on there...did a good job....It's a sad thing because there's a lot of good-meaning people put a lot of time into that and really cared about what they were doing. Then to see nothing happen out of it is kind of discouraging. (*Park County Residentialist*)

B. They Did A Pretty Good Job—They Didn't Hurt Anything

You know, [the Task Force] didn't hurt....I know several of the people that were on it and some of them came away with a better feeling, some of them came away with a worse feeling....[The one's that thought it helped] felt they did some good and that the government was honest with them. The other group...[says] it's the old conspiracy theory, 'They used us.' (*Park County Residentialist*)

[Regarding the Task Force] I think...[they made good decision about] the flood plain and how the rip-rap was done to prevent erosion. Overall, there was a lot of good, sound thinking and they reached compromises. The health of the river came first and will be maintained. (*Park County Residentialist*)

C. When Groups Fight, Bad Decisions Follow

I don't think [the various groups] really work well together....I'll give you an example: After the floods of '97, our bridge, that is right up stream from us, is called Carter's Bridge. [It] was determined...dangerous, and that it needed to have some major repairs....During those floods [the bridge] was creating a dam situation....[But they never considered] changing...the bridge so that the bridge would work better during major floods because of its historical [value]. Never; it didn't even come up. Wasn't even a part of the equation....I've asked several times [for information concerning] how much money was spent on repairing that bridge—and I know it was phenomenal....I know it was a historical bridge, fine. They could have kept the historical aspect [but] there are a lot of problems with that bridge....[And] they did damage to the river when they did the construction....They started bulldozing the island at five o'clock on a Sunday morning and I got on the phone to everyone I could possibly [think of] to get it stopped....They did some pretty major damage. In fact, they did some channel changes by doing that. (*Park County Residentialist*)

V. Other Concerns

A. Water Quality and Industrial Uses

The sewage overflow...[at] the plant...in Gardiner....If we have an outage, they didn't have a switch that would cut it over to emergency generator to keep it going...until...the guy...working part-time get[s] there to start the generator....The concern that I have is Yellowstone Park should have their own facility and not be using Park County's facility. (*Park County Residentialist*)

Gardiner sewage was going into the river....Gallons of raw sewage. It was so sad. (*Park County Residentialist*)

In the last two years, in the spring run off...the river turns...orange and...it's coating over the rocks and everything....So there's run-off that's coming from somewhere. (*Park County Residentialist*)

If you have a major industry setting up somewhere downstream,...just putting a burden on the whole ecosystem, that has ramifications all over the river. (*Park County Residentialist*)

I think people treat the river with more respect than they used to. It used to be that the place to get rid of the trash was right on the river. When I was a boy there were all kinds of old tires on the river. Gardiner would just roll them down the hill into the river. If you wanted a big fish, they fed on the sewage. I don't think they were especially good eating. Those things have been cleaned up. (*Park County Residentialist*)

B. Weeds

We're involved...with weed control and have an...early summer project every year on different ways to control noxious weeds....I would go there and hand-pull...a lot of noxious weeds on the island, and it's getting to the point here where it's beyond that...and the State doesn't do anything about it. (*Park County Residentialist*)

We have had some problems with weed control....I noticed Fish and Game...spraying the weeds but in the past they were doing the moth thing, ...which never worked. We pumped thousands of dollars into spraying knapweed. (*Park County Residentialist*)

When you float the river you notice there is a lot of knapweed. We have a lot here. We see a lot of it and it runs off everything else. (*Park County Residentialist*)

C. Cottonwoods

The cottonwoods...are dying here....There are trees...right along the water, getting plenty of water, and you'll see...a branch that will die and next year will be another one and another one....And...the canopy does a lot of things. It's a great thing for wildlife...when we have heavy rains, it keeps the silt run off and all these things....And I really don't see a response from the state or the federal government really trying to figure out exactly what's happening. (*Park County Residentialist*)

VI. Changes in Management and Controls

A. It's Tough When Things Change—Water Rights

We're going to have a leasing meeting over on Mill Creek with the watershed group next week, and a lot of people are feeling that they're coming up short because [one guy is]

leasing his water rights [to provide for the fish in the creek]. It is going to effect me, but we have a law that says, if it's beneficial use, you can do that....Fish and Wildlife is beneficial according to our legislature, now....And, let's face it, I'll be the first to say, that sometimes the fish in that creek are worth more than the hay I'm raising....[Most people] got their irrigation systems put in by the government—not totally free, but with lots of grant money—that was ten years ago....[Now, with this guy leasing his water, another] says, 'It's not fair.' Well, it may not be fair, but you did get a new pivot...for half-cost....So, I don't know. It's tough. I mean, that's going to be a real contentious meeting....We have water rights, but we dry up Emigrant Creek every year. So I can see both sides. But sometimes I [ask about the] outfitters and how much money they make on the Yellowstone River—it's tremendous. (*Park County Residentialist*)

B. Stop Building Near the River

We need to be looking pretty seriously at why we're still allowing homes to be built on the river. And...I'm kind of speaking out of two ends here because I do live on the river, but I do think that since the floods we need to look more seriously at what we are allowing....Each place wants to protect their property....Are we all going to be able to do that and still allow the river to be healthy? (*Park County Residentialist*)

It will put more people on the river. It will impact the visual aspects of the river. I think there should be setbacks from the river, for aesthetic problems and pollution from septic tanks. (*Park County Residentialist*)

C. Need for Consistency in Controls

During the '96 flood they started losing bank along Highway 89, and they went into panic mode. The Park Service, the State, came here and brought trucks loads of rock....During the major part of the flood they were dumping truck loads of rock along 89. And they were losing tons of money, but they felt like they had to do it. But it was interesting to me that they can do that, but if you have a homeowner...[who] starts to do that, you would probably be handcuffed....Even if it is the highway [department], I mean, still....[Whether] it's the Department of Transportation [or] it's a homeowner....Are we all going to work together? Because, if we don't, we're just going to continue to have problems. (*Park County Residentialist*)

I often feel that the State and the Federal government are far more lackadaisical and do not implement rules....We were told by the county when we built here, 'You better not let a pebble go into the river while you're building'....[But] I've watched...when part of the bluffs falls down, they just plow it...right into the river....They don't abide by the same rules and regulations. (*Park County Residentialist*)

The Army Corps of Engineers [said] the levy in Livingston...does not follow specifications. If you were to walk that levy, you couldn't believe it would ever break, but I understand the standards....[This means] those people on the Northeast side of Livingston [will be affected]...and that's not a real high income area. Being told that you

can't do changes to your property, that's going to be a hardship....We'll see what happens with all of that. Not to say they need to not be concerned [about flooding]. They do. But I think it's kind of a funny deal. They're allowing building in other places...that flooded [in the past]. They know it. (*Park County Residentialist*)

I think the local decisions can be made as far as growth policy and planning....But I think the State needs to be in charge of the resources and the wildlife....Access to public lands— that needs to be a state controlled thing. It's best managed that way. (*Park County Residentialist*)

[The State] is following all the rules. The Legislature makes rules. Sometimes they are knee-jerk rules and State agencies have to follow those because that's what the law says. It's not necessarily that they agree with it all the time....But Legislature is influenced by special interest groups....It's a nasty, dirty process [and] probably the least favorite thing that I've ever had to deal with [was] go up there and talk to those guys....There's also the bureaucratic thing:...one person [is] not willing to stick their neck out and make a decision and they pass the buck to the next person....So you end up talking to half a dozen people before you get somebody to that has the guts to make a decision. (*Park County Residentialist*)

D. Policies Need to Change as Demands Grow

The latest the efforts have been a lot about growth....They've been trying to work on the growth policy and the subdivision regulations....So that there are setbacks from the river. And Park County Environmental Council is definitely behind setbacks, and I agree. I agree that new building needs to be different than the old....It shouldn't be that we say, 'Well, you live like that so why not [the next?]'....You know, things change. We need to be better stewards because there are a lot of us. (*Park County Residentialist*)

We're going to get more regulations....And, of course, you have all sides....You get the guys that say, 'They are taking our property rights.' I try to tell people that what you do [on one side of] the road sometimes does affect the other side of the road. They don't like to hear that, of course, but we have to be honest....It's the conspiracy theory, the government's-got-too-much-control theory. I get a lot of that here. (*Park County Residentialist*)

It was so important then that the Park County Environmental Council and myself worked on trying to get a growth policy and subdivision regulations that were going to be thinking about smart growth, thinking about if this area is going to be developed, [do it] in a manner that's best for the landscape and the residents. (*Park County Residentialist*)

E. Listen to Locals

The largest input should be from the local people and what they want...because each county here has different circumstances....Even though you have a lot of similarities, each one has their own uniqueness. (*Park County Residentialist*)

The people that live here and ranch here and have businesses here,...they have a lot of concerns about regulations...because it might effect their property and their values....A good example of that is the rest of the United States wanted wolves in the west, but...they don't have to live with them....I have friends where they've killed their sheep,...their cows,...their horses....The people that live here have to deal with this and everybody else just thinks it's wonderful...and there's a big concern about the buffalo...and the brucellosis. (*Park County Residentialist*)

I would like to feel like somebody's listening to me because I live here....I care about it and...I want to see it still be here for my grandchildren and generations to come....God gave me this [to me] and he made me the caretaker and this is my job. I don't do it for money. I do it because this is my job. (*Park County Residentialist*)

[The Chair of the County Commission] he said we want to have a growth policy committee with members of the community...and have [the plan] percolate from the bottom up....I attended meetings with the Livingston group...for five or six months and the county hired...a facilitator and...each of the 13 [geographic] parts of the county met and presented [their thoughts] to the planning board....[Then the plan] was adapted...by the planning office and the County Commissioner....Our concerns were totally nullified....What really got me was [that we put in] a concerted effort....They said they had 34 statements from individuals...[and that] if you have a certain number of letters that say the same thing they get the same weight as a bunch of people that sit in a room and bang heads for five months. (*Park County Residentialist*)

There was a bridge...that we had to have removed. During high water we were worried about it creating a log jam in that channel behind the house. It was very hard to get the State to do that. We almost had to threaten [them]....Their fishing access actually crosses our property and...my neighbor's property. So if they weren't going to pull that bridge we were going to shut their access off....It had to come to...that to get them to do something....They just passed the buck, you know....Typical bureaucratic bullshit. (*Park County Residentialist*)

VII. We All Need to Get Along

A. We're So Polarized But We Have to Accept Controls

We all need to get along and see each other's side—and that just doesn't happen because we're all so polarized anymore. It's a really fine line...when you're in business....I try to walk that line all the time and try not to upset too many people, but sometimes you have to. (*Park County Residentialist*)

My boys were...out on the river fishing...and [the neighbor] down the road calls the Sheriff on them every time. They fish off the bank....Now, these boys grew up here. Their grandpa has worked really hard on stream access laws. They know what they can legally do. He calls the Sheriff on them every time and the [Sheriff] can't do anything

about it. [The neighbor is] the one who would like to see no one on his riverbank fishing. He thinks it's his river bank and it isn't. (*Park County Residentialist*)

There is a segment of the population that thinks there shouldn't be any irrigation water taken out of the river, which is entirely against my upbringing. I was on the Board of Directors for the Park Ranch Canal for many years. It was a constant hassle with environmental regulations as far as getting the water out of the river. It was quite an expense to the canal company to try and get the water out....I am not on the board anymore. It was a headache. (*Park County Residentialist*)

You have people that come here from other areas....There are tents laid on the islands and they've got bonfires going. And it would just be devastating if it...got out of control....I just think that there needs to be some policy set....We all like the freedoms and don't really like the federal government...telling us what to do, but...you have to look at the overall protection of something that's beautiful here. (*Park County Residentialist*)

They just don't want [zoning]. I was raised on a ranch and I lived in town for awhile and the townspeople gave up the right to zoning. They just exchanged one right for another. I wouldn't live in town without zoning....When there isn't any zoning, they can't tell you what to do, but when you have zoning you have the right to stop a big farm next to you, for example. You give up one right and acquire another one. (*Park County Residentialist*)

The high school...was built on right on an old channel. I mean, some of those mistakes were made a long time ago...[and] they have to determine how they're going to live with it. I think Livingston...[and] Paradise Valley...[have] a lot of concerns....I'm not saying you shouldn't be allowed to build along the river; I just think there needs to be certain setbacks. (*Park County Residentialist*)

B. Private Property Rights Are Important

Private property rights are always an issue along the river. They often are trampled on by regulation and then those regulations cost the private property owners along the river money....There is always a balance and to find that balance and for everyone to be responsible along the river....I think that's done through education not through regulation. (*Park County Residentialist*)

Conservation easements, for a lot of ranchers,...[mean] you are giving up rights to your ground. Once they are gone, they are gone. (*Park County Residentialist*)

The ranching community has had an aversion to any zoning or control and I think that mindset has prevented a lot of these things from happening. I think that is changing but they just don't want any more regulation. (*Park County Residentialist*)

[In our subdivision] there are 13 lots and 60 acres on the entire island. We have the largest lot and ours is 3.17 acres. The common ground belongs to everybody. Everybody

in the subdivision has access. We have a liability insurance problem if they just open it up. (*Park County Residentialist*)

C. Stewardship—Private and Among Agencies

I think [we need] to be good stewards of the river and to the environment. I think that's probably the most important thing that we need to be right now. (*Park County Residentialist*)

If you want to protect your property, try to get some information, if you can,...[about what's] going to be the most appropriate thing for the river and your property....If you're going to buy on the river, then you need to be somewhat responsible in what you're doing, especially because the river is the most vital thing we've got probably. Water is going to be the biggest issue in the next decade, especially after a fire season like the one we just had. (*Park County Residentialist*)

The Army Corps of Engineers...needs to look very seriously at the roads that are in proximity to the river and the bridges. If bridges are dams, they need to be repaired and they need to be looked at....[The Army Corps of Engineers needs] to be [a] good steward because they are the ones that really have the say on what is going to happen....And if they're asking us to be good stewards, then they should be too. (*Park County Residentialist*)

I don't anticipate any changes for our place. I have two sons...and I'd like to leave it just like it is for them. (*Park County Residentialist*)

The most painful...[thought is to] treat the river as an object...that's up for negotiation and that can be abused....That would really hurt because you couldn't have a relationship with the river. (*Park County Residentialist*)

D. Why Get Involved

I'm on the watershed group....I'm on the local fire board here, and I'm on the electrical Co-op Board...[and I] used to be on the refuge board, but not anymore. So, yeah, I'm pretty active in the community....You know, you can't complain about things if you're not trying to help solve the problems....And there's pros and cons....I get more public input than anybody else because I am out in the public all the time. (*Park County Residentialist*)

A few of us just got to kicking around ideas [about] what we could do and maybe there was some grant money out there to help do things better....[We got involved with the watershed group] and it is kind of Ag oriented, I'll say....[We're trying to keep] the Ag producers in the area profitable....We have a wheat grant...and we have a cottonwood grant [so] that we can plant cottonwoods along the river....Anyone that owns property from Livingston to Gardiner [can join] the Upper Yellowstone Watershed Group....We encourage that, especially the 20-acre tract people...that don't know knapweed is a weed.

They think it's a pretty flower and they're watering it. [They don't know] we have bugs that we released [to kill the knapweed]....One of our grants, two years ago, [provided money for us to] release bugs on seven sites along the river. (*Park County Residentialist*)

A lot of these new people come in here and buy these big ranches and the first thing they want to do is close off access on a previously used county road....We as citizens need to fight for...our access to the public lands because these people make no bones about it, they're trying to fence off their own little piece of heaven. (*Park County Residentialist*)

My big thing is the public access and the public's right to use the resources and enjoy the wildlife....Most of us live here because of what the outdoors has to offer....We just really need to safeguard that. (*Park County Residentialist*)

The squeaky wheel gets the grease. If you want to have something done you've got to make some noise. It's good to think about doing it the right way. It's good to understand the process. I just think your average person doesn't understand the process. They don't know how to go through it. (*Park County Residentialist*)

Not everybody sees things the way I do. But...it's good to have different opinions too, because that's how you get problems solved. You can't have everybody agree on everything. You need to be able to have good healthy arguments about things and hash out the details. (*Park County Residentialist*)

I think your typical person isn't up-to-date....[They] usually...don't want to be bothered with things...until it actually affects their pocketbook....People are not really proactive....So...residents do get left behind to a certain extent. They're not going to get involved until all of a sudden their well gets contaminated and they have to drill a new well and then they're fined. (*Park County Residentialist*)